2025　デミング賞

選考理由書　受賞報告講演要旨　デミング賞委員会事務報告

2025 年 11 月

デ　ミ　ン　グ　賞　委　員　会
一般財団法人 日本科学技術連盟

２０２５年度

デミング賞　選考理由書

2025 年度
デミング賞 選考理由書

2025 年度のデミング賞各賞ならびに日経品質管理文献賞の受賞者は 10 月 1 日開催の第 2 回デミング賞委員会において，下記のとおり決定いたしました.

1．デミング賞本賞

大橋　徹二 氏
株式会社小松製作所　特別顧問

2．デミング賞特別功労・実践賞

安藤　之裕 氏　一般財団法人日本科学技術連盟　国際事業参与

David Hutchins 氏　Chief Executive, David Hutchins Innovation Limited

3．デミング賞

Global Indian International School, Tokyo

Tata Autocomp Hendrickson Suspensions Private Limited

4．日経品質管理文献賞

「実践 方針管理 革新戦略推進のフレームワーク」
編　者：日本科学技術連盟 方針管理研究会　編

「自動車産業を支え続けて 100 年 黒子のモノづくり」
著　者：長谷川　士郎 氏

「JSQC 選書 38　慢性期医療の品質マネジメント 人生に伴走する医療の確立に向けて」
監　修：一般社団法人日本品質管理学会
著　者：進藤　晃 氏

デミング賞本賞

大橋　徹二 氏

株式会社小松製作所　特別顧問

［選考理由］

大橋徹二氏は 1977 年に東京大学工学部を卒業し，同年小松製作所に入社，国内外の要職を経て 2013 年に代表取締役社長兼 CEO，2019 年に会長に就任し，本年より特別顧問を務めている．長年にわたり建設機械業界，経済界，国際社会において重責を担い，TQM モデルの進化の一形態を企業経営の実践を通して鮮やかに示した稀有な経営者である．その歩みは品質経営の未来を方向づける極めて大きな意義を持つ．

大橋氏の功績はおもに三点に集約できる．第一は 2015 年開始の「スマートコンストラクション」である．ドローン測量，設計データの ICT 建機登録，自動施工を通じて施工全体を最適化し，安全性と生産性を飛躍的に向上させた．国内 4 万件超の現場に導入され，建設業界の構造変革を牽引した．さらに施工経験者を採用し，営業担当者を 8 カ月間教育して現場改善コンサルタントに育成し，顧客との共創関係を築いた．

第二は建設業界全体への貢献である．人手不足と高齢化に直面するなか，国交省「i-Construction」と連携し ICT 建機普及，人材育成，IoT センタ展開を推進した．国交省直轄工事における ICT 土工案件は 2022 年度に 87％へ拡大し，施工時間 3 割削減，生産性 2 割向上を実現した．また日本建設機械工業会の会長として，中古車査定制度廃止や排ガス規制対応を主導し，市場を国際的に通用する透明なものへと導いた．

第三は経団連でのリーダーシップと国際貢献である．副会長として六年連続で「経営労働政策特別委員会報告」を取りまとめ，2023 年には 30 年ぶりの水準となるベースアップ率 3.99％，2024 年には 5.58％を実現した．賃上げを「人への投資」と位置づけ，企業の成長と従業員幸福の両立を指針とした点は高く評価される．さらにカンボジアでの地雷除去や学校建設など地域自立型発展を支援する活動は，「命を守る建機」を体現した CSR として国際的に称賛されている．

これらの功績を支えるのは，従来の TQM を深化させ「顧客価値創造」を中核に据える理念である．すなわち，①顧客課題を総合力で解決し不可欠な存在となること，②社員一人ひとりが顧客視点で新たな価値を創造すること，③事業活動を通じ社会に貢献することである．そしてこれを具現化する五つの戦略――未来志向の共創，顧客主語の課題設定，安全と信頼を最優先する姿勢，協業を社会的価値創出と捉える視点，迅速な意思決定――は，TQM の最も重要な価値観である「顧客と社会の満足」を現代的に深化させるものである．

大橋氏の業績は経営における単なる財務的成功にとどまらず，TQM が社会的価値を包含する経営ツールへと進化したことを実証するものであり，次代の品質経営を牽引する指針といえる．

（主要文献）

大橋徹二（2020）：コマツの経営と事業戦略，経済同友会リーダーシッププログラム
大橋徹二（2023）：Society5.0 が目指す働き方改革，九州経営者協会
「経団連首脳を迎えての新春講演会」
Ohashi,T.（2025）：Quality Management to maximize Corporate Value at Komatsu,
Key Note Speech, International Conference on Quality 2025

デミング賞特別功労・実践賞

安藤　之裕 氏

一般財団法人日本科学技術連盟　国際事業参与

［選考理由］

安藤之裕氏は，現在，合資会社安藤技術事務所代表，一般財団法人日本科学技術連盟国際事業参与，国際品質アカデミー（IAQ）President-Elect，デミング賞審査委員会主査委員，QC サークル埼玉地区名誉世話人を務めている．

安藤氏は，1981 年電気通信大学大学院修士課程を修了後，日本科学技術連盟に入職し，1991 年から 1992 年にかけて米国 JOINER ASSOCIATES INC でシニアコンサルタントとして活動した．その後も日本科学技術連盟を拠点に TQM の普及と発展に尽力し，2005 年からは安藤技術事務所代表としてコンサルティング活動を展開している．さらに，早稲田大学客員教授や複数大学の非常勤講師を歴任し，教育面でも貢献してきた．

安藤氏の業績は，きわめて多岐にわたる．第一に，日本科学技術連盟や日本規格協会，海外産業人材育成協会（AOTS）などを通じて，デミング賞審査，品質経営度調査の立上げ，数多くのセミナー・研究会の企画運営，専門誌編集などに携わり，国内外における TQM の普及と啓発に尽力した．この功績により，2011 年 JSQC 品質管理功労賞，2019 年 AOTS 功労者表彰など，数多くの顕彰を受けている．第二に，QC サークル活動に 30 年以上関わり，幹事指導プログラムを策定するなど人材育成に尽力した．第三に，ISO/TC176 の活動を通じて ISO 9004 改正や JIS Q 9004 制定に参画し，国際標準化活動にも顕著な貢献を果たした．第四に，TQM コンサルタントとして国内外で多数の企業指導を行い，多くの企業をデミング賞受賞に導いた実績は特筆に値する．さらに，研究活動を通じ TQM コンサルティング方法論の体系化にも寄与した．

また，出版・講演活動も豊富であり，「レジャーサービス業の TQC への挑戦」，「第四世代の品質経営」（翻訳），「TQC 用語辞典」，「営業の QC 事例集」など 15 冊を超える書籍の出版に携わり，日経品質管理文献賞を 4 度受賞している．これらの文献や講演は，TQM の考え方や方法論を社会に広める上で大きな役割を果たした．

以上のように，安藤氏は実践，指導，教育，標準化，出版といったあらゆる側面において，TQM の普及・発展に継続的かつ顕著な功績を挙げてきた．国内外で社会的評価も極めて高く，まさにデミング賞特別功労・実践賞の理念に合致する人物である．

（主要文献）

［1］「レジャーサービス業の TQC への挑戦」（1989 年，日科技連出版社，編著）
［2］「第四世代の品質経営」（1994 年，日科技連出版社，訳）
［3］「TQC 用語辞典」（1985 年，日本規格協会，共著）
［4］「営業の QC 事例集」（1986 年，日科技連出版社，共著）
［5］「QC 七つ道具の奥義」（2012 年，日科技連出版社，共著）
［6］「問題解決学としての統計学」（2019 年，日科技連出版社，共著）

デミング賞特別功労・実践賞

David Hutchins 氏

Chief Executive, David Hutchins Innovation Limited

［選考理由］

デビッド・ハッチンス氏（デビッド・ハッチンス・イノベーション社会長）は英国の自動車部品などの製造業で生産，開発，品質管理などに従事し，管理職を経験した．これらの企業活動で，品質管理の重要性と英国の遅れを痛感し，品質管理の研鑽を積み，1969 年に英国の品質管理専門家に認定された．その後，品質コンサルタントとして今日まで主に英国および欧州の産業界で品質管理を指導し，その普及に尽力してきた．この間，1976 年にバーミンガム大学大学院院で修士号を取得した．

ハッチンス氏は，故石川馨先生が主導する日本の優れた全社的品質管理に大きな感銘を受け，1970 年代末に日本的 TQM を英国に導入し，長期にわたり英国および欧州への TQM の推進･普及に尽力してきた，英国および欧州のトップクラスの品質コンサルタントである．現在も常に日本の最新の TQM を学び，英国・欧州以外に世界 15 カ国の企業・組織に TQM を指導してきた．また IAQ（国際品質アカデミー）の正会員に選出され TQM 専門家として TQM に関するすぐれた著書を多数刊行している．

氏の主に英国，欧州への TQM の実践と普及活動の特徴は次の 3 点に集約できる．

１．英国および欧州での TQM の継続的な推進

同氏は英国において日本的品質管理を推進し，トップのリーダーシップの下，顧客志向の考え方，経営戦略に立脚した方針管理，日常管理，QC 手法による改善活動を推進し，特に 1990 年以降英国および欧州 6 カ国にて計 24 の大企業を指導し，TQM を定着させた．さらに英国品質協会から TQM の主要な教育教材の開発，教育の実施を受託し，英国における多くの品質管理専門家を育成してきた．

２．日本の QC サークルを中核にした全員参加による経営の英国・欧州への導入と普及

同氏は 1980 年代初期に英国・欧州企業および近隣のエジプト，チュニジア，イランなどに日本の QC サークル活動を導入し，QC サークルの現場への定着・普及に注力し，全員参加による経営を推進している．また国際 QC サークル大会にも積極的に参加している．

３．欧州と日本との交流による貢献

同氏は 1980 代から多くの研修チームを欧州から派遣し，日本的 TQM の修得と欧州への普及を継続している．また，日本からの英国への視察団を複数回受け入れ，英国企業の経営，TQM を紹介してきた．さらに特筆すべきことは，1990 年代初頭に日本産業界が ISO 9000 の認証制度を導入する際に，同氏を中心とする専門家チームが日本科学技術連盟や日本企業において教育・研修を実施し，日本企業の ISO 9000 の推進・定着を支援したことである．

以上のように同氏は日本的 TQM の英国および欧州での普及に大きく貢献した．

（主要な著書（すべて単著）（1990 年以降））

“Achieve Total Quality”, Association with the Institute of Directors（1992）
“Hoshin Kanri – the Strategic Approach to Quality”, Routledge（2008）
“Quality Beyond Borders”, Routledge（2019）
“Self-Managing Work Groups – the key to Participative Management”, Makeway publishing（2023）
他に “In Pursuit of Quality”（1990），“Just in Time second edition” 1992）など合計 10 冊．

The Deming Distinguished Practice Award

Mr. David Hutchins

Chief Executive, David Hutchins Innovation Limited

[Reason for selection]

Mr. David Hutchins (Chairman of David Hutchins Innovation Ltd.) worked in production, development, and quality management in the British automotive parts manufacturing industry and held managerial positions. Through these corporate activities, he keenly felt the importance of quality management and Britain's lag in this field. He dedicated himself to mastering quality management and was certified as a British Quality Management expert in 1969. Since then, he has worked as a quality consultant, primarily for the British and European industries, guiding quality management and striving to promote its adoption. During this time, he obtained a master's degree from the University of Birmingham Graduate School in 1976.

Mr. Hutchins was profoundly impressed by Japan's outstanding total quality management, spearheaded by the late Professor Kaoru Ishikawa. In the late 1970s, he introduced the Japanese Way of TQM in the UK and has since devoted himself to promoting and spreading TQM in the UK and Europe. He is a top-notch quality consultant in the UK and Europe. He continues to study Japan's latest TQM practices and has provided guidance on TQM to companies and organizations in 15 countries worldwide, in addition to the UK and Europe. Later he became the only full member from the UK of the International Academy for Quality (IAQ) at the time of his election and, as a TQM expert, has published numerous outstanding books on TQM.

The key characteristics of his endeavor to implement and promote TQM primarily in the UK and Europe can be summarized under the following three heads.

1. Continuous Promotion of TQM in the UK and Europe

Mr. Hutchins promoted the Japanese Way of TQM in the UK, promoting customer-oriented thinking, policy management grounded in management strategy, daily management, and improvement activities using QC techniques under top leadership. Particularly since 1990, he guided a total of 24 large companies in the UK and six European countries, establishing TQM. Furthermore, he was commissioned by the British Quality Association to develop key TQM educational materials and deliver training, thereby cultivating numerous quality management specialists in the UK.

2. Introduction and dissemination of management practices centered on Japanese QC circles with total employee involvement in the UK and Europe

Mr. Hutchins introduced Japanese QC circle activities to British and European companies for the first time in the early 1980s, focusing on establishing and spreading QC circles throughout the workplace and promoting management based on total employee involvement. He also actively participates in the International QC Circle Convention.

3. Contributions through exchanges between Europe and Japan

Mr. Hutchins has been sending numerous training teams from Europe to Japan since the 1980s, and continues to promote the acquisition of the Japanese Way of TQM and its dissemination in Europe and other regions such as Egypt, Tunisia, and Iran. Additionally, he has hosted multiple study missions from Japan to the UK, introducing them to the management practices and TQM at British companies. Furthermore, it is particularly noteworthy that when Japanese industry introduced the ISO 9000 certification system in the early 1990s, a team of experts led by him conducted education and training programs for the JUSE and Japanese companies, supporting the promotion and establishment of ISO 9000 within Japanese enterprises.

As described above, Mr. Hutchins has made a significant contribution to the spread of the Japanese Way of TQM in the UK and Europe.

(Major Publications (All Single-authored books) (Since 1990))

1. "Achieve Total Quality", Association with the Institute of Directors (1992)
2. "Hoshin Kanri – the Strategic Approach to Quality", Routledge (2008)
3. "Quality Beyond Borders", Routledge (2019)
4. "Self-Managing Work Groups – the key to Participative Management", Makeway publishing (2023)

He has published a total of 10 books, including "In Pursuit of Quality" (1990) and "Just in Time second edition" (1992).

デ ミ ン グ 賞

Global Indian International School, Tokyo

代表者名：カントリーディレクター　スミット　ミシュラ 氏
Mr. Sumit Mishra, Country Director
所 在 地：東京都江戸川区西葛西 8-3-13
T E L：03-6631-0441
事業内容：教育
売 上 高：19 億 1,500 万円
従業員数：150 名

[選考理由]

同組織は，Global Schools Foundation が創設した Global Indian International School（本部はシンガポール，2002 年からアジアを中心に 64 のキャンパスを展開）の一つである．同組織の設立は 2006 年であり，東京都江戸川区に 4 つの校舎がある．幼児教育から中等教育までのクラスがあり，インドカリキュラムだけでなく，ケンブリッジや国際バカロレアを含む多様な国際カリキュラムを提供している．2025 年 1 月時点で，生徒数は 1,394 名であり，教職員は 150 名（内，教員数は 106 名）である．2024 年の売上高は 19 億 1,500 万円である．

生徒数は増加しており，今後も拡大が見込まれている．一方，提供するカリキュラムやキャンパスが拡大されるにつれ，運営上のルールや手続き（オペレーション）とそれらを支援する IT システムや仕組みの間にズレが生じ，教育の質のばらつき，関係者の満足度の低下が課題として現れた．これらの課題を解決し，品質管理を強化するために，2013 年に TQM を導入した．TQM を通じて，IT システムや教育の仕組みを改善し，資源を最適化することで，組織全体の持続的な成長を目指した．トップの強力なリーダーシップのもと，３つの具体的な目標「2030 年までに都内最大のインターナショナルスクールになる」「品質管理を通じて卓越した教育を提供する」「学校コミュニティの成長に積極的に関与する」を明示し，その実現のための戦略を策定し，全組織に展開した．また，各部門において日常管理体制を構築し，改善活動を実施するための仕組みづくりに取り組んできた．

同組織の TQM の第一の特徴は，教職員・生徒・保護者などを巻き込んだ全員参加の改善活動の実践である．生徒間チームワークの促進と学校業務の改善への共同責任の醸成を目的とし，改善活動と QC サークルを導入している．発達段階に応じてすべての生徒の才能が開花するという認識に基づき，９つの要素からなる教育フレームワークを導入し，これからの社会で必要となる総合的な資質や能力を育成している．

第二の特徴は，IT システムを活用した TQM 活動の推進である．教育の質の改善を推進するために必要なデータを収集，蓄積，分析する仕組みを構築している．ERP システムを開発し，生徒・保護者・教員の情報を扱い，タイムリーなコミュニケーションを可能にしている．この仕組みは，効率的な運営，資源の最適化，ステークーホルダー・エンゲージメント，継続的改善，組織全体の持続的な成長に大きく貢献している．

第三の特徴は，教育産業における TQM の活用である．方針管理を活用した目標の展開，改善活動を通じた生徒・教職員の人材育成，教員による各教育カリキュラムと職員による支援業務のプロセスの標準化，IT システムを活用した多様なステークーホルダーとの情報共有など，顧客満足度向上の視点で TQM 活動を推進し，効果をあげている

以上の結果として，QC サークルの改善件数は増加し，社外表彰数も増加した．また，生徒の学業成績である ASAS スコアは目標を達成し，Student Satisfaction Survey Score，Parent Satisfaction Score などの満足度関連スコアも目標を達成した．さらに，年々生徒数は増加しており，TQM 活動の効果が出ている．

The Deming Prize

Global Indian International School, Tokyo

Representative : Mr. Sumit Mishra, Country Director
Address : 8-3-13 Nishikasai, Edogawa-ku, Tokyo
TEL : 03-6631-0441
Business description : Education
Turnover : 1.915 billion yen
Number of employees : 150

[Reason for selection]

The organization is one of the Global Indian International Schools established by the Global Schools Foundation (headquartered in Singapore, with 64 campuses primarily across Asia since 2002). The organization was established in 2006 and has four campuses in Edogawa Ward, Tokyo. The school offers classes from kindergarten through senior secondary level, providing not only the Indian curriculum but also diverse international curricula including Cambridge and the International Baccalaureate (IB). As of January 2025, the number of students was 1,394, and the number of faculty and staff was 150 (including 106 teachers). Revenue for 2024 was 1,915 million JPY.

The number of students is increasing and is expected to continue growing. On the other hand, as the curriculum offerings and campuses expanded, discrepancies emerged between operational rules and procedures and the IT systems and mechanisms supporting them. This led to issues such as inconsistent educational quality and declining satisfaction among stakeholders. To address these challenges and strengthen quality management, it introduced TQM in 2013. Through TQM, it aimed for sustainable growth across the entire organization by improving IT systems and educational frameworks while optimizing resources. Under strong leadership at the top, three specific objectives were clearly stated: "To become the largest international school in Tokyo by 2030," "To provide education excellence through quality management," and "To provide a positive engagement on the growth of the school community." Strategies to achieve these objectives were formulated and rolled out across the entire organization. Furthermore, it strived to establish mechanisms for building Daily Management system and implementing improvement activities within each department.

The foremost characteristic of the organization's TQM is the implementation of improvement activities involving the participation of all the members, including teachers, students, and parents. To promote teamwork among students and foster shared responsibility for improving school operations, it has introduced improvement activities and QC circles. Based on the recognition that all students' talents blossom according to their developmental stage, it has introduced an educational framework comprising nine elements to cultivate the comprehensive qualities and abilities needed in the society of the future.

The second characteristic is the promotion of TQM activities utilizing IT systems. It has established a system to collect, accumulate, and analyze the data necessary to promote improvements in the quality of education. It has developed an ERP system that handles student, parent, and teacher information, enabling timely communication. This system significantly contributes to efficient operations, resource optimization, stakeholder engagement, continuous improvement, and the sustained growth of the entire organization.

The third characteristic is the application of TQM in the education industry. The organization is advancing TQM activities from a customer satisfaction perspective to good effect through:

- Deploying objectives using Policy Management
- Developing students, teachers and staff through improvement activities
- Standardizing processes for educational curricula by teachers and support operations by staff and
- Sharing information with diverse stakeholders using IT systems

As a result, the number of QC circle improvements increased, and the number of external awards also increased. Additionally, it achieved the target for the ASAS score, which reflects student academic performance, and also met the target for satisfaction-related scores such as the Student Satisfaction Survey Score and Parent Satisfaction Score. Furthermore, the number of students has been increasing year by year, demonstrating the effectiveness of TQM activities.

デ ミ ン グ 賞

Tata Autocomp Hendrickson Suspensions Private Limited

代表者名：最高経営責任者　ラビンドラ　グレリア 氏
所 在 地：Plot No. D236/5, Chakan Industrial Area, MIDC, Phase - II, Village – Varale, Chakan, Tal-Khed, Pune, Maharashtra – 410501, INDIA（インド）
T　E　L：91-72-4924-4401
事業内容：サスペンションシステムの設計開発・製造・供給
売 上 高：公開不可
従業員数：243 名

[選考理由]

同社は，インド Tata Autocomp System Limited と米国 Hendrickson International Corporation との合弁会社である．Hendrickson 社の技術をもとにインド市場へのカスタマイズを行い，Tata Motor Limited（TML）などの車両メーカ，アフターマーケット，海外市場に対し，中型・大型商用車及び EV バス向けのサスペンション，並びにサスペンション用の部品を開発・製造・販売している．本社はインドの Pune にあり，Pune と Jamshedpur に生産拠点を持つ．従業員数は契約社員を含め約 243 名である．

同社は，TML に対する依存度が高いこと，新事業の売上が期待通りに伸びないこと，品質問題が多いことなどを踏まえて，2018 年に TQM を導入し，新製品開発と新規顧客開拓による収益成長などに重点的に取り組んできた．

同社の TQM の第一の特徴は，変化が激しい事業環境の中で中長期的な経営目標・戦略を策定し，TQM を活用することでその達成に必要な組織能力の向上に取り組んでいることである．顧客中心の考え方に立って中期計画（ビジョン，ミッション，数値目標，戦略）を 4 年ごとに策定するとともに，重点を絞って全社年度方針を策定・展開し，部門横断管理の推進や供給者などとの連携を強化しながら，改善活動，日常管理，人材育成などに取り組んでいる．

第二の特徴は，日常管理・改善活動を通して全員参加を実現するとともに，人材育成に体系的に取り組んでいることである．業務の出来映えを評価する KPI を設定し，異常の原因追究・再発防止を行っている．また，改善活動を 3 つのレベルに分けて組織的に推進している．さらに，コンピテンシーの定義と評価方法，階層別分野別教育体系などを整備し，人材育成の基盤を強化している．

第三の特徴は，市場の動向に基づいて新製品・新規顧客の開拓と需要を満たす生産能力の向上に積極的に挑戦していることである．OEM，エンドユーザー，JV パートナーなどの協力を得て市場分析を行い，新たな事業領域を見つけ，新製品の開発に取り組んでいる．また，顧客の求める既存製品のバリエーションを特定し，顧客を拡大することに取り組んでいる．さらに，将来の需要を見据えて，Pune に工場を設立した．

以上の結果として，市場が不安定な中にもかかわらず市場シェアが拡大するとともに，新規事業を含めた売上高，既存製品の新規顧客を定常的に確保・拡大できており，TML への依存度を軽減できている．また，社内不適合を削減でき，重大事故 0 を維持できている．さらに，従業員の活動への参加割合が着実に向上し，そのような中で必要な人材が育つとともに，従業員満足度が向上している．

Tata Autocomp Hendrickson Suspensions Private Limited

Representative : Mr. Ravinder Guleria, Chief Executive Officer
Address : Plot No. D236/5, Chakan Industrial Area, MIDC, Phase - II, Village – Varale, Chakan, Tal-Khed, Pune, Maharashtra – 410501, INDIA
TEL : 91-72-4924-4401
Business details : Design, development, manufacturing, and supply of suspension systems
Turnover : Not for public release
Number of employees : 243


[Reason for selection]

The company is a joint venture between India's Tata Autocomp System Limited and the U.S.'s Hendrickson International Corporation. Based on Hendrickson's technology, it customizes products for the Indian market and develops, manufactures, and sells suspensions for medium- and heavy-duty commercial vehicles and EV buses, along with suspension components, to vehicle manufacturers such as Tata Motors Limited (TML), the aftermarket, and overseas markets. It is headquartered in Pune, India, with production facilities in Pune and Jamshedpur. The company employs approximately 243 people, including contract workers.

The company introduced TQM in 2018, focusing on revenue growth through new product development and new customer acquisition, in light of its high dependence on TML, slower-than-expected sales growth in new businesses, and numerous quality issues.

The foremost characteristic of THSL's TQM is its commitment to formulating medium- to long-term business objectives and strategies within a rapidly changing business environment, and to enhancing the organizational capabilities necessary for achieving them through the application of TQM. Based on a customer-centric approach, the company formulates a mid-term plan (vision, mission, numerical targets, strategies) every four years. It also develops and implements focused company-wide annual policies and engages in improvement activities, daily work management, and human resource development, promoting cross-functional management and strengthening collaboration with suppliers and other partners.

The second characteristic is that it achieves full participation through daily work management and improvement activities while also systematically engaging in human resource development. The company has established KPIs to evaluate the quality of operations and is conducting root cause analysis and recurrence prevention measures. Furthermore, it systematically advances improvement activities across three layers. Additionally, it is strengthening the foundation for human resource development by establishing competency definitions and evaluation methods, as well as a layer-wise and field-wise education and training system.

The third characteristic is that it actively pursues new product development, new customer acquisition, and increased production capacity to meet demand based on market trends. The company is conducting market analysis with the cooperation of OEMs, end users, joint venture partner, and others to identify new business areas and engage in the development of new products. Additionally, it is working to identify variations in existing products that customers desire and expand its customer base. Furthermore, with an eye on the future demand, THSL has established factory in Pune.

As a result, despite market instability, the company has expanded its market share while steadily securing and growing sales, including new businesses, and acquiring new customers for existing products, thereby reducing its dependence on TML. Furthermore, it has achieved zero major accidents while reducing internal nonconformities. Additionally, employee participation rate in activities has steadily increased, fostering the development of necessary talent within this environment while also improving employee satisfaction.

日 経 品 質 管 理 文 献 賞

「実践 方針管理 革新戦略推進のフレームワーク」

日本科学技術連盟 方針管理研究会　編

2024 年 7 月　株式会社日科技連出版社

［選考理由］

TQM 活動の要素の一つである方針管理は，経営環境の変化に適応し運営管理の変化を生み出すための経営ツールとして多くの企業 / 組織で導入され，さまざまな効果を上げてきた．本書は，日本科学技術連盟方針管理研究会で主に 2020 年から 2023 年にかけて実施された研究活動の成果を出版したものである．研究会では方針管理に焦点を当て，これを推進している多くの企業 / 組織が抱えている今日的な課題を取り上げ，その対応の方向について研究しており，方針管理の考え方，方法論，体系 / 体制 / しくみ，手法，および人の行動のあり方まで含め，革新的な提案を行っている．本書では現代の方針管理における意義と問題意識をのもとで，①環境変化への対応，②組織能力の獲得，③顧客価値創造という多くの組織が直面している課題解決に向けた提言を行っている．

本書は研究会の活動成果をもとに，3 部構成で記述されている．第Ⅰ部は方針管理の基本的な考え方に立ち返って，方針管理の環境変化への対応の課題に取り組んでいる．特に TQM の推進のもう一つの重要な経営要素である日常管理を取り上げ，環境変化に対応するために事業計画に基づく方針管理と日常管理を組み合わせた運営管理の方法を提案している．第Ⅱ部では TQM 推進の狙いとして組織能力の獲得を取り上げ，方針管理のスパイラルアップを提言している．方針管理の PDCA だけでなく，方針の実行に必要な組織能力の PDCA，組織能力向上のための TQM の PDCA を提案することで，方針管理を中心とした組織能力を向上するための TQM 推進を提案している．第Ⅲ部では近年の TQM の重要な課題となっている顧客価値創造を取り上げ，顧客価値創造戦略を効果的の行うための方針管理の在り方を提案している．価値共創やアジャイル的な管理を必要とする顧客価値創造戦略に向けて，従来の年度方針管理ではうまくいかない課題を整理した上でプロジェクト型方針管理という新しい方針管理を提言している．

本書の特徴は方針管理を実施している企業 / 組織が抱えている実際の問題を具体的に示し，各企業で実践されている事例や調査結果を豊富に紹介している点である．考え方だけでなく具体的な課題が事例を通して理解できるように配慮されている．また，多様な経営システムや経営ツールが図表として数多く掲載されている点も大きな特徴である．実際に方針管理の課題解決を行う際に，経営ツールとして示されている図表を用いて状況を整理することで具体的な行動を実施しやすくなっている．方針管理のマンネリ化や形骸化などに直面し実効が上がらない課題や経営環境の変化にうまく適応できていないという課題を抱えている方々にとって，本書は方針管理の新しい姿を考え，それに向けた改善を実施するための数多くの貴重な示唆や気づきを与えてくれる良書である．また，環境変化の下で TQM 推進に頭を悩ませている多くの方々にも是非読んでいただきたい一冊である．

日 経 品 質 管 理 文 献 賞

「自動車産業を支え続けて 100 年 黒子のモノづくり」

長谷川　士郎 著

2024 年 10 月　株式会社幻冬舎メディアコンサルティング

［選考理由］

本文献の著者は，2010 年にデミング賞，2013 年にデミング賞大賞を受賞した株式会社メイドーの代表取締役名誉会長の長谷川士郎氏である．メイドーはエンジンやブレーキに用いられるボルトを製造しており，現在ではボルト業界でトップクラスのシェアを誇っている．

本文献の内容は次のとおりである．

PART1　日本の自動車産業を支える陰の立役者
PART2　たった一つの不良品が何千万台の自動車に影響を及ぼす
PART3　技術革新なくして新製品は生まれない
PART4　MADE IN JAPAN の自動車がグローバル市場で勝つために
PART5　すべてのモノづくりはヒトづくりがあってこそ
PART6　100 年に一度の大変革期を迎えるモビリティ産業

Part1 で創業時から 1999 年までの取り組みを記載した後，Part2 ～ Part5 では，No.1 戦略を達成するうえで重要な役割を果たした 4 つの取り組み，a）改善活動・品質保証，b）技術革新・新製品開発，c）グローバル展開，d）ヒトづくりについてそれぞれ述べ，最後の Part6 で将来の取り組みについて記述している．TQM の視点から一つの企業の取り組みを総合的に捉えることのできる構成となっている．

様々な経営環境の変化に直面する中で，経営に対するぶれない考え方をもって取り組んでこられたこと，経営者の視点から語られている考え方が，「品質は工程で作りこむ」「毎日の改善の積み重ねが未来をつくる」「社員一丸となって改革に取り組む」「技術革新なくして新製品は生まれない」「同業他社との共存共栄を考える」「企業理念の浸透こそ，海外進出成功の鍵」「最終製品のために仕事を磨き，仕事を磨くためにヒトを磨く」「決められたことを守る」「相手の心理に寄り添える営業」など，TQM における重要な考え方とよく一致している．

それぞれの場面において経営者として考え実践されてきたことが，具体的な事例をもとに数多く記述されている．「トヨタ生産方式」「TPM」「創意工夫提案」「トップ点検」「品質賞への挑戦」「技術革新」「工程改革」「人材教育」「New5S」「AK 活動」「アメーバ経営」など，読者が自分ならどう行動するかを考えながら読むことができて，理解・共感しやすい内容になっている．

本文献は，自動車産業の黎明期から激動の時代を生き抜き，ボルトのトップメーカーへと成長した一企業の物語である．品質管理，技術革新，人材育成に情熱を注ぎ，常に変化を恐れずに挑戦し続けてきた姿が感動的に描かれている．特に，トヨタ生産方式の導入やデミング賞受賞など，品質向上への取り組みは，日本の製造業の模範となる．また，グローバル化への挑戦や，100 年に一度の大変革期における新たなビジョンを示すなど，時代を先読みして進化を続ける姿は，現代の経営者にも多大な示唆を与える．TQM の啓蒙書として優れており，多くの経営者・管理者に是非読んでほしい一冊である．

日 経 品 質 管 理 文 献 賞

「JSQC 選書 38　慢性期医療の品質マネジメント 人生に伴走する医療の確立に向けて」

一般社団法人日本品質管理学会　監修
進藤　晃 著

2025 年 5 月　一般財団法人日本規格協会

［選考理由］

本書は，従来急性期医療を中心に論じられてきた「医療の質」の概念を，慢性期医療という視座から再考し，その特性に即した品質マネジメントの枠組みを提示したものである．慢性期医療は「人生に伴走する医療」としての役割を担いながらも，学術的，体系的な整理が不十分であった領域であり，本書はこの空白を埋める初めての試みである．医療のみならず，品質マネジメント研究の発展においても，新たな領域を切り拓いた文献として高く位置づけられる．

本書は，まず医療が本来持つ「不可視性」「不可逆性」「侵襲性」「個別性」「知識格差」といった特性を整理し，品質マネジメントを実践する際の基盤を提示している．次に，慢性期医療を人生会議や人生設計と関連づけつつ，「人生に寄り添う医療」として定義し，その難しさを明らかにする．さらに，産業界で用いられてきた PDCA，標準化，KAIZEN，QMS といった品質マネジメントの思想や手法を医療に適用する際の課題と原則を論じ，医療版 QMS の設計，構築，運用の全体像を具体的に示している．また，経営管理や日常管理，委員会活動を含む組織運営の基盤を解説し，医療現場の典型的な問題解決手順を体系化している点も特徴である．特に，著者が自身の医療法人において 10 年以上取り組んできた QMS 実践の軌跡を紹介している部分は，理論を裏づける具体的な事例として説得力を持つ．その実践記録からは，現場の苦悩と工夫，そして改善に愚直に取り組む姿勢が伝わり，読者に深い共感を呼び起こす．

本書の意義は三点に整理できる．第一に，慢性期医療という未開拓領域に対して，品質マネジメントのフレームワークを初めて包括的に提示した点である．第二に，産業界の手法を単に模倣するのではなく，医療固有の複雑性に即して再構成し，新たなパラダイムとして「医療を構想する」，「医療を設計する」という考え方を提起した点である．第三に，実践に裏づけられた記述により，理論と現場が有機的に結びついている点である．このように，本書は独創性と実践性を兼ね備えている．

以上述べたように，本書は，医療の品質マネジメントの発展に大きく寄与する．タイトルには慢性期医療とついているものの，急性期医療に携わる方も含め，すべての医療・介護従事者に参考になる．さらに，産業界に従事する方にとっても，産業界で取り組んできた QMS の意義を再確認することができる良書である．新たな概念を提示するなど，独創性に優れているとともに，品質マネジメントの基礎も学ぶことができる教科書としての価値もある．

２０２５年度

デミング賞本賞
受賞報告講演要旨

大橋　徹二

株式会社小松製作所　特別顧問

「コマツにおける企業価値最大化のための品質経営」
～お客さまに選ばれ続ける存在を目指す顧客価値創造活動～

１．はじめに

コマツは、1961 年の QC 導入以来、品質管理（TQM）を愚直に推進し、2007 年からは、更に顧客価値創造活動（コマツ内の呼称は、ブランドマネジメント活動）を進めてきた。

その成果の一つがスマートコンストラクション®である。

スマートコンストラクション®は、建設現場のプロセス全体の機械・車両・人、そして地形などのあらゆる「モノ」のデータをデジタルでつなぐことで、現場の全てを「見える化」し、現場の飛躍的な生産性向上を実現するソリューションである。安全、人手不足、事業の成長などに関して、顧客の課題のみならず、社会課題の解決に寄与し、国の施策にも貢献するソリューションが創出できたこと、大変誇りに思っている。

顧客価値創造で大事なのは、お客さまの理想と現実のギャップを理解し、お客さまと共に解決することで、「課題を分析して、解決していく」プロセスは TQM そのものである。あらゆる課題解決を TQM で愚直に取り組むことが、コマツの文化である。

今回は、このようなコマツ全体の取り組みについて評価いただきデミング賞本賞を受賞したものと考え、コマツの品質経営について私の考えや経験を述べさせていただく。

２．コマツの概要

（１）コマツの沿革

コマツ（小松製作所）は、進取の精神に富んだ創業者・竹内明太郎が経営していた石川県の遊泉寺銅山で使用する鉱山機械を製造する「小松鉄工所」が母体となって、1921 年に設立された。

明太郎は 1900 年に開かれたパリ万博で最新の機械技術を目の当たりにし、「工業を発展させずして国家の発展はない」という思いを強くし、工業振興に尽力した。明太郎が掲げた創業の精神、「海外への雄飛」、「品質第一」、「技術革新」、「人材育成」は、現在の私たちにも受け継がれている。

北陸の小さな企業からスタートし、海外進出や M&A などを重ね、104 年の時を経て、世界第２位の建設機械メーカーへと成長した。現在、海外売上高比率は 91%、社員数は６万５千人を超え、うち約 7 割が日本以外で働いている。

（2）主要製品と建設・鉱山機械のビジネスモデル

コマツの主要製品である建設・鉱山機械のうち、一般建機は、土木工事や建築工事などで使用され、インフラ開発や都市化を支える重要な役割を果たしている。鉱山機械は、鉱山現場で使用され、現代社会に欠かせない鉱物資源の採掘に使われている。また、この他、大型プレス機械などの自動車用製造設備や、半導体製造設備、林業機械の商品も取り揃えており、幅広い産業分野に貢献している。

建設・鉱山機械と自動車を比較して大きな違いは、建設・鉱山機械は生産財として使われることで、特に鉱山機械は生涯稼働時間が自動車の約 30 倍になるほど、使用年数が長きにわたっている。長期間稼働させるためには部品の修理・交換やオーバーホールが不可欠で、鉱山機械では部品の消費額が本体価格の 2 倍もかかる。

また、新車販売にとどまらず、建設機械のライフサイクル全体にわたって顧客にサービスを提供するビジネスモデルである点も特徴的であり、この顧客との長い関係性がコマツのブランドマネジメント活動につながっている。

3．品質管理活動の歴史と展開

（1）Ⓐ対策の推進

冒頭に述べたとおり、コマツは 1961 年に QC を導入し、その後 TQM と発展させ、成長してきた会社である。1960 年代初頭、競合他社である海外の大手建機メーカーが日本進出を決定した時、コマツは存亡の危機に直面した。この競合他社が日本に進出した場合、コマツは品質レベルや会社規模で大いに劣るため、「コマツは 3 年以内に電話帳から消える」とまで言われた。

そこで、コマツはⒶ対策本部を設置し、中型ブルドーザーの品質向上を最優先課題として全社的な取り組みを開始した。競合他社に匹敵する品質を 1 年で達成するという厳しい目標のもと、QC 活動を徹底し、設計・製造・営業・サービス部門が一体となって改革を進めた。

1961 年末から 96 台の試作車を製造し、実地テストを通じて改良を重ね、1963 年には「スーパー車」として量産・販売を開始した。結果として、耐久性や信頼性が大幅に向上し、競合他社の製品と互角の品質を実現し、会社存続の危機を乗り越えることができた。

この取り組みは、品質管理の枠を超え、総合的品質管理（TQM）へと発展し、1964 年に建設機械メーカーとして初めてのデミング賞受賞につながった。

（2）Ⓑ活動による海外市場での競争力向上

その後、1972 年からは、海外市場進出に対応するため、信頼性の高い大型ブルドーザーの開発を目的としたⒷ活動を始めた。これは、耐久性だけでなく故障の少なさや短い休車時間が求められる海外市場のニーズに応えるための取り組みであった。コマツは、この活動の中で、製品自体の壊れにくさなどの「固有の信頼性」とともに、製品が実際に使われる場面で期待通りに機能し続ける「使用の信頼性」の獲得を目指し、商品企画から開発、生産、販売、サービスまで、一気通貫でのシステム改善を実施した。

Ⓑ活動では、実績データに基づく信頼性向上を図り、追跡車による情報収集体制を確立。これにより品質向上のノウハウを蓄積し、輸出拡大に成功、コマツの輸出比率は 20%から 50%超と大幅に飛躍した。この成果は、ホイールローダーのⒸ活動、油圧ショベルのⒹ活動、ダンプトラックのⓆ活動へと応用され、各製品の信頼性が向上。結果として、コマツは主要製品の品質を世界水準に引き上げ、

海外市場での競争力を高めた。

（3）海外現地法人へのTQM展開とデミング賞受賞

1980年代以降、コマツは、経済摩擦や急激な円高の対応策として、世界各地に生産工場を設立し、海外現地生産を加速させた。同時に、海外現地法人へQC活動を展開していったのである。

海外工場へのQC展開として、ひとつ、私の経験を紹介したい。

2003年4月、コマツアメリカ（KAC）副社長に就任した私は、赤字が続いていたペオリア工場の再建を任されていた。原因は、300t積み鉱山用大型ダンプトラック（930E）の過積載による品質・信頼性の問題で、部門間の連携不足が問題の根幹にあった。私は、9か月間、月に3度か4度、200km以上離れたペオリア工場へ通い、設計から生産、販売、サービスまで全部門の代表を集め、山積みの問題を一つひとつ「見える化」していった。2004年1月にKAC社長に就任した後、品質向上を目的としたプロジェクトMを始動。Mはマイニングの Mで、大型ダンプトラックの生き残りを賭けたペオリア工場版Ⓐ対策である。

当時開発中だった400ｔ積みダンプトラック（960E）では、ISO9001とTQMを基盤に、コマツ建機の品質保証体系に準じた商品開発を実施し、開発初期から市場導入後まで品質を確実に管理した。さらに、販売・アフターサービスを含むKAC・代理店全体の業務ルールとプロセスを整備し、マイニング機械の品質保証体系を確立した。方法として、930Eシリーズの開発・商品化の反省を踏まえ、開発・生産・販売・サービスの各プロセスについて、コマツ建機の品質保証体系と比較しギャップを洗い出して、実直に整備したものである。

この活動は、KACの企業文化に変革をもたらす取り組みとなった。また、プロジェクトMの成功は、マイニング事業がコマツのメイン事業に成長するきっかけとなった。

以上が北米での取り組みであるが、コマツは、この他、中国・アジアの海外生産法人で、ナショナルスタッフの人材育成と組織能力向上を目的に、TQMによる品質経営体制構築を推進してきた。

この成果として、2013年に中国の小松山推工程機械（KSC）がコマツ海外現地法人として初のデミング賞受賞。続いて2018年にコマツインドネシア（KI）、2023年にタイのバンコクコマツ（BKC）がデミング賞を受賞している。

4．顧客価値創造活動（ブランドマネジメント活動）の概要と実践

（1）ブランドマネジメント活動導入の背景

コマツのブランドマネジメント（BM）活動は、「お客さまにとってなくてはならない度合いを高め、パートナーとして選ばれ続ける存在となる」ための活動である。そのための第一歩として求められるのは「お客さまを徹底的に知る」ことである。全ての部門において、顧客視点で顧客の事業、現場の課題を理解し、コマツグループ、代理店が一丸となってその課題を達成することで、顧客との良好な関係を築いていくことを目指している。

BM活動は、2007年に開始した。導入のきっかけは、建機市場の多様化と、新興国メーカーの参入および技術力向上である。コマツは、Ⓐ対策以降、高品質と新機能の付加で競争を勝ち抜いてきたが、新興国の技術力も大きく向上し、製品単体での差別化はより困難になっていた。

新興国勢との価格競争に巻き込まれないためには、新しい競争軸、ビジネスモデルが必要となる。この課題はあらゆる先進国メーカーに共通していた。そこで浮上してきたのが、総合力を生かすソリ

ューション提供（コマツではKomtraxや循環ビジネス等）と企業文化であった。新機能やサービスは外形的には模倣できても、社員一人ひとりの行動に支えられた顧客対応などに表れる信頼性の企業文化や歴史（広義のブランド）への評価は容易には真似できないからである。

しかし一方で、当時の世の中で一般のブランディング戦略は生活者=個人を対象とする、BtoC[1]ビジネスが主流で、コマツのようなB to B[2]ビジネス、生産財メーカーにはそのまま適用できなかった。このため、2007年4月にブランドマネジメントプロジェクトをスタートさせ、独自の手法を追求・構築することから始めた。

（2）ブランドマネジメント活動とは

プロジェクトチームは、コマツのBM活動について、「お客さまの理想状態の達成をコマツがお手伝いすること」と定めた。そして、①お客さまの事業と現場を徹底的に理解し、②理想状態の実現に向けたPDCAをお客さまと共に回していく、③その過程を通じて、長期的な視野に立った「顧客視点への意識改革」と「人材育成」を図る――ことを、BM活動の目的とした。言い換えれば、「お客さまにとってなくてはならない度合いを高め、パートナーとして選ばれ続ける存在となる」ための活動と位置付けたのである。

BM活動で重要なのは、お客さまと一緒にお客さまの理想状態を定義し、現実とのギャップを明確にしたうえで、コマツグループの総合力で理想状態を実現していくことにある。コマツは、マーケティング・サービス部門だけではなく、開発部門・生産部門など全社体制で活動を進めている。

また、コマツグループの中で賄えない能力は、社外の力を借りることも厭わず、オープンイノベーションで進めることが活動の成功の鍵と考えている。

一般の改善活動とBM活動の違いは起点にある。前者は標準や規格とのギャップなど現状の不具合が起点であるの対し、後者はお客さまの理想状況と現実のギャップにある。ただ、起点に違いがあるにせよ、その後の「課題を分析して、解決していく」というプロセスはTQMそのものである。活動の中でお客さまと一緒に議論して将来像を探る上でも、TQMの基本的な考え方が大いに役立っている。コマツにTQMのベースがあるからこそ同活動を進められると言っても過言ではないだろう。

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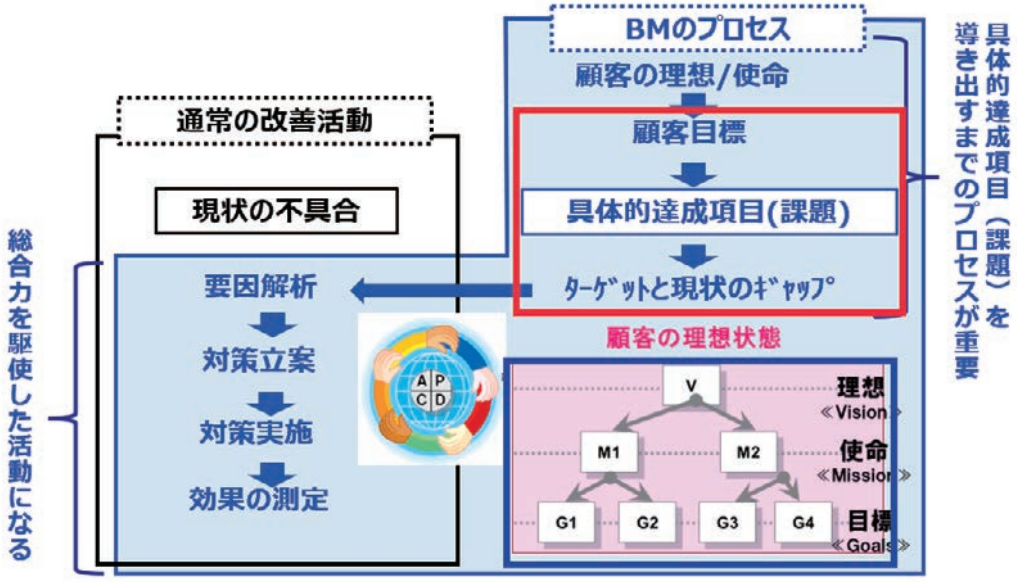
[1] B to C：Business to Consumer
[2] B to B：Business to Business



【図１：BM プロセスと通常の改善活動の関係図】

（３）ブランドマネジメント活動のグローバル展開

日本での活動開始から１年後の 2008 年には、代理店、顧客との活動をスタートし、日本市場に加え、海外４拠点（北米、チリ、南ア、オーストラリア）で活動を開始した。各地域におけるチーム設置、ミーティング、ワークショップ、顧客訪問等の活動を通じて、コマツグループ内で BM 活動の考え方と顧客との活動が浸透していった。

2010 年３月には、本社と５拠点（北米、チリ、南ア、オーストラリア、中国）で第１回グローバルブランドマネジメント（BM）会議を東京で開催した。（その後、参加現地法人が増え、グローバル BM 大会に発展）これは BM 活動を実施している各拠点で BM 大会を開催し、そこで選抜されたチームがグローバル BM 大会で好事例を発表するというもので、年１回継続して開催し、グローバルでの情報やノウハウの共有を図っている。活動 18 年目を迎えた現在は、活動地域はグローバル全地域に拡大している。

５．スマートコンストラクション®と社会課題への対応

（１）スマートコンストラクション®導入の背景

冒頭で述べた通り、ブランドマネジメント活動を推進した中で得られた大きな成果の一つが、スマートコンストラクション®である。

2010 年頃、日本の建設業界は深刻な労働力不足と生産性の低下に直面していた。技能労働者は 2000 年時点で約 450 万人だったが、2015 年には 350 万人に減少、2025 年には必要労働者数に対して約３割程度不足する見込みだった。理由として、建設業界は、伝統的に労働時間が長く、労働災害も多い。それに比較して報酬は低いため、若年層の流入が減少してきたこともある。このため、労働者の高齢化比率・労働災害比率とともに高いレベルになっていた。また、生産性を高めるためのデジタル活用も進んでいない状況にあった。

デジタル活用が進まない大きな理由は建設業界の多重構造（重層下請構造）にあった。建設業界は、元請企業が工事を受注し、１次下請、２次下請、さらにその下に複数の下請企業が連なる「重層下請

構造」が一般的であるが、このような構造が生産性を上げるデジタルツール導入の障害となっていた。

多層的な下請構造では、元請から孫請まで情報がスムーズに共有されにくく、デジタルツールの導入効果が限定的になること、元請企業や大手ゼネコンは DX に積極的でも、下層の中小企業や個人事業者は IT リテラシーが低く、設備投資余力も乏しい場合があるため、デジタル化に取り残される傾向があることがあげられる。コマツは、土木施工の生産性向上のために、このような多重構造の下層に位置する中小規模の施工業者にターゲットを定め、ICT を活用した建設現場の生産性向上の支援を開始した。

（2）ICT 建機の開発

このような取り組みの第一弾は、ICT[3]建機の開発である。コマツは 1990 年代から ICT 建機の開発を進めており、2013 年に世界で初めて掘削から仕上げ整地までのブレード操作を自動化した ICT ブルドーザーを、2014 年に世界初のマシンコントロールを装備した油圧ショベルを市場に導入した。ICT 建機は、土木施工現場の生産性の向上や熟練オペレーターでなくても高精度な作業ができる運転操作を容易にすることに貢献した。

一方で、ICT 建機導入を推進する中で、ICT 建機が関与するのは一部の施工プロセスのみであり、お客さまの施工全体の生産性向上には ICT 建機だけでは限界があることが徐々にわかってきた。

このような気づきとお客さまの真の課題を解決するという BM 活動の観点から、建設現場全体の工程を ICT でつなぎ生産性向上を図るスマートコンストラクション®の構想が立案された。

（3）スマートコンストラクション®の開始

コマツは 2015 年 1 月にスマートコンストラクション®のコンセプトを発表し、翌 2 月よりサービスを開始した。これは、建設現場の一つひとつのプロセスを最新のデジタル技術でデジタル化するとともに、各プロセスの情報を ICT でつなぐサービスである。このサービスによって、現場の安全性と生産性を向上し、蓄積されたデータを社会インフラ整備や災害復旧の活用にもつなげる。具体的には、以下の技術が導入された。

① ドローン活用による現況の高精度測量
② 施工完成図面の 3 次元化
③ 施工計画シミュレーション
④ ICT 建機とアプリによる 3D 施工・施工管理
⑤ 日々の施工の見える化
⑥ 完工後の施工データ活用

また、全国の自社レンタル拠点にスマートコンストラクション推進室を設置し、IoT[4]センタを 10 カ所に展開。セミナーやサポートセンターの設置、専門コンサルタントによる支援体制を整えた。

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[3] Information and Communication Technology（情報通信技術） の略
[4] IoT は Internet of Things（モノのインターネット） の略で、さまざまな「モノ」がインターネットに接続され、情報をやり取りする技術や仕組みのこと

お客さまの施工全体の生産性向上を図るスマートコンストラクション®はコマツの独自技術やノウハウだけではなしえなかったサービスである。土木施工の現場管理者経験者を多数採用し、彼らのノウハウを活用して営業担当者を専門コンサルタントに育成するプログラムを開発した。

ドローンによる高精度測量については、ドローンそのものは市販の商品を改良し、撮影した画像から木や小屋や自動車などのノイズを除去して地形を３次元化する技術は、米シリコンバレーのスタートアップとパートナーシップを結んで獲得したものである。

お客さまの真の困り事を解決し価値を創造するためには、社内に技術がなければ社外に求めることが必要であり、コマツは技術の「自前主義」に固執せずオープンイノベーションを進めたのである。

【図２：スマートコンストラクション®概念図】

（３）スマートコンストラクション®と国土交通省「i-Construction」との連携

2015 年 12 月、国土交通省は i-Construction[5]委員会を開催し、ICT を全面的に活用して建設現場の生産性革命を推進する方針を打ち出した。2016 年度は「生産性改革元年」とされ、政府は 2025 年までに建設現場の生産性を 20%向上させる目標を掲げた。これに呼応し、コマツは以下の三位一体施策を展開した。

① ハード：ICT 建機の本格市場導入

② ソフト：スマートコンストラクション®アプリの機能拡張

③ 人材：IoT センタの全国展開とスマートコンストラクション®コンサルタント育成

[5] 2016 年に国交省が掲げた「生産性革命プロジェクト」のうちの一つで、建設施工の全てのプロセスで ICT を導入することにより建設生産システム全体の生産性向上を目指す取組み

コマツは、関係省庁・団体・顧客に対してプレゼンテーションやデモ、試乗会、広報活動を積極的に行い、スマートコンストラクション®と i-Construction の相乗効果で知名度を急速に高めた。

その結果、土木工事の ICT 施工の導入件数は、2024 年度の国土交通省の直轄工事で９割、地方自治体でも約 3,500 件に増加。同年度の調査では、作業時間が平均 35%削減されるなど、導入効果が明確に示された。

コマツが始めた建設現場の生産性改善に向けたスマートコンストラクション®の取り組みは、現場全体の取り組みに発展し、この結果 2025 年６月時点での同サービスは国内で累計約５万件の現場への導入に至った。また、2018 年４月からは北米、欧州にも同サービスの展開を開始している。

（4）コマツのありたい姿

コマツのありたい姿は、「安全で生産性の高いクリーンな現場を実現するソリューションパートナー」である。

お客さまのソリューションパートナーとして、「安全で生産性の高いクリーンな現場」を世界中に広げていくことを目指し、イノベーション・DX、バリューチェーンビジネスの拡大、人材への投資、パートナーシップの拡大を通じて、モノ価値とコト価値によるソリューションを更に進化させていく。

この考え方の起点には、BM 活動の成果であるスマートコンストラクション®が大いに関わっている。

６．TQM・ブランドマネジメント活動を通じた人材育成

先ほども述べたが、BM 活動を進める上で、TQM のベースがあることが不可欠である。コマツは、長年 TQM を愚直に推進し教育を継続しているが、TQM 教育を受けている人ほど、顧客価値を創造する活動でアウトプットが多いと感じる。TQM が身についている人は、お客さまと課題を話し合う時に、お客さまの言ったことを鵜呑みにするのではなく、TQM の考え方を応用してお客さまの真の課題を見つけるべく議論することができる。そのような建設的な議論を通して色々な問題を分析し、解決策を見つけ実現することに TQM の真価が発揮される。

BM 活動は、導入の初期には現場での機械や稼働に関する問題解決を提案する事例が多かったが、次第に、現場での生産性向上、コスト低減等の改善提案を実施し、顧客と共に取り組む事例が増加した。さらに 2015 年頃からは、顧客の事業成長の課題を見つけ、共に達成に取り組むという「共創目標の達成」に向けての活動例が出てくるようになった。

建設・鉱山機械という「モノ」から、顧客の現場・業務、さらには最終ユーザーを含めた事業運営全体に着目し、成長のための課題を見つけ、協力して達成するという「コト」へと、視点・提案がシフト・拡大してきている。言い換えれば、顧客の「機械」の課題を解決するだけではなく、仕事全体の課題を考え、提案ができる人材が育ってきている。

BM 活動でお客さまの困りごとを見つけ TQM で解決していく、このような取り組みを継続することが、新しい価値を創造する人材育成につながっていくと考えている。

７．まとめ―コマツの考える企業価値・品質経営

コマツは企業価値を、「社会を含むすべてのステークホルダーからの信頼度の総和」と考え、「品質と信頼性を追求し、企業価値を最大化する」ことを経営の基本としている。コマツの DNA であるコマツウェイには、TQM や BM 活動の考え方をまとめており、経営の基本を実現する基盤となるものである。

社会課題解決に貢献する「新たな顧客価値創造」とそのための「人材育成・組織能力向上」を TQM・BM 活動を通じて行うことによって、経営の基本を実現することがコマツの品質経営だと考える。

このような品質経営を実現するために、常々私が言っている行動の優先順位は「S（安全・健康）、L（コンプライアンス）、Q（品質）、D（納期）、C（コスト）」の順である。これは、私が栃木県真岡工場長時代から言い始めたスローガンで、現在はコマツウェイにも収められ、コマツグループの共通の行動指針の一つとなっている。コマツは、今後も S・L を最優先にし、すべてのステークホルダーに対して「八方良し」となる持続可能な経営を続けていく所存である。

最後に、このたびの受賞は、私個人の成果ではなく、コマツグループの取り組みが評価されたものであり、お客さま、代理店・協力企業・ソリューションパートナー等ビジネスパートナーなどのご支援、さらに諸先輩方や現役社員の努力の積み重ねの賜物である。このようなご支援・ご努力に心より感謝申し上げて、受賞の報告の結びとしたい。

２０２５年度

デミング賞特別功労・実践賞
受賞報告講演要旨

安藤　之裕

一般財団法人日本科学技術連盟　国際事業参与

TQM コンサルタントとして積み重ねてまいりました

一般財団法人　日本科学技術連盟　国際事業参与
安藤之裕

1．謝辞

私は，大学院修士課程を修了したのち，米国のコンサルタント会社 Joiner Associates Inc. にいた 1.5 年間以外には，組織に勤務することなくフリーランスのコンサルタントとして過ごしてきました．

このたび，デミング賞特別功労実践賞という栄誉ある賞を賜り，誠に光栄に存じますとともに，これまで多くの皆様からご指導とご支援をいただき，心より感謝申し上げます．

まず，大学時代からの恩師で，この道に導いていただいた後も常にご指導をいただいてきました東京理科大学名誉教授の狩野紀明先生に深く感謝いたします．また，狩野先生のご紹介により，修士課程修了後すぐに独立コンサルタントになろうなどという当時としてはとんでもない機会を与えていただき，大学でのゼミの参加に加えて多くの企業で実地に TQM の指導を教え込んでいただきました早稲田大学名誉教授の池澤辰夫先生に深く感謝申し上げます．

また，そのような突飛な実績のない若輩者にもかかわらず，肩書を与え長きにわたり門戸を開いてくださっている一般財団法人日本科学技術連盟，ならびに，海外への仕事に結び付けていただいた上に長期にわたって機会をいただいてきました一般財団法人海外産業人材育成協会（AOTS）等の関連団体の皆様にも心より感謝申し上げます．

更に，今までクライアントとして TQM 実践の機会をいただいてきた多くの企業の皆様にも深く感謝申し上げたいと思います．先生方のご指導を実践に生かすために，多くの無理難題をお願いしましたが，それらを見事にやり遂げ，立派な成果をあげ，それらが次々に受け継がれながら TQM 自体の発展に寄与され続けてきたのではないかと考えております．

今回，この賞をいただくにあたり，これまでの経験から TQM に関しましての雑感を申し述べたいと存じます．

2．TQM とは何か

今回ご評価いただきました私の専門とするものは TQM ですが，その TQM とはそもそもどんなものなのかと問われると，実は私自身も未だによくわかっていないというのが実感です．

私も原案作成委員長として携わって，2022 年に発行された「一般社団法人　日本品質管理学会 JSQC-Std 11-001：2022　TQM の指針　－組織能力の向上－」の中では，「TQM は，デミング賞受賞企業などの努力により常にその新しい形が提示され続けてきたものであり，画一的な型があるわけではなく，業種・業態さらには各組織のその時々の状況により柔軟に応用され，時代の変化とともに進化してきた．すなわち，これが TQM であると規定すると，個々の業種・業態にはそぐわないものとなったり，規定した瞬間から既に旧式となったりするものである．」という一文があります．

すなわち，TQM とはという問いかけに対して逆説的な本質が TQM の本質ではなかろうかと考え，いつになってもよくわからなくても当たり前と開き直っています．

同規格の中では「組織が TQM を実践する上では，以下の（A）～（C）が重要．

（A）使命・理念・ビジョン，業種，業態，規模及び経営環境に応じて明確な経営の意思のもとに，積極的な顧客指向の，さらには組織の社会的責任を踏まえた経営目標・戦略が策定されていること．

また，その策定において，トップマネジメントがリーダーシップを発揮していること.

（B）（A）の経営目標・戦略の実現に向けてTQMが適切に活用され，実施されていること.

（C）（B）の結果として，（A）の経営目標・戦略について効果をあげるとともに，将来の発展に必要な組織能力が獲得できていること.」としています.

これはデミング賞審査で最も重視している審査の視点から来ています.

簡単にまとめてしまえば，経営目標・戦略を策定し，そのための活動を実施し，それに合った効果をあげるというもので，TQMを実践する上ではというよりは，およそすべての経営での基本であり，ある意味当たり前のことを述べていると思います．TQMの解釈には色々ありますが，私個人としてはこの解釈が好きです．ただし，当たり前のことを言っているようですが，短期的に経理的な指標を中心とした欧米流の経営とは対極をなす，すごい考え方で，よほど優れた考え方ではないかと思っています．ただし，現在米国などで一般に所謂成功しているといわれる企業の多くはTQM流の経営思想ではなく経理指標優先でありTQM流は些か分が悪いのが実態であることが残念だと感じています.

この三条件はシンプルで当たり前なことだと思われがちですが，現実にはなかなか実現が難しいと実感しています.

デミング賞・あるいはそのためのTQM診断の際に求められる，品質管理実情説明書をまとめるときにまず引っかかることの多いのがこの単純なポイントでした．理念とか思想とかが云々であるという議論の以前に，目標で掲げた項目と効果で表した項目では順番も違えば，中身も合っていないというように，目標と効果との整合性がとれていないという例によくお目にかかってきました．更に，品質保証，新商品開発，原価管理，納期管理，人材育成などの経営活動の要素の目標との整合性や，それぞれの経営活動要素の目標とそれらの成果とも整合性が取れていないというようなテクニカルな問題にお目にかかるのは日常茶飯事でした.

場合によっては,「経営目標」自体が色々なバージョンが出てきてどれが本物だかわからないとか,当然全員に周知されているなどということは無いとか，そのための戦略なども経営目標に対して不整合であってもあればまだよい方で，そもそも戦略がまったく見当たらないなどという経験もありました．仕方がないので，良い結果を出していたものから遡って，どんな戦略をどのようにしてやってきたかをまとめてみると，そもそも何をやろうとしていたのかという経営目標が明らかになってきて，全体のストーリーを整理してみると，わが社はこんな素晴らしいことをやっていたということに気が付いたということもありました.

そこで，私は近年では品質管理実情説明書の中身を描き始める前に，まずその目標と効果を中心としたスケルトン（骨格）をまとめていただくようにお願いしています．この過程で，多くの企業が直面するのが「真の目標は何だったのか」という問いです．文書をまとめる段階で初めて，経営目標が曖昧過ぎていたり，実は本来の狙いとは違うことが書いてあったり，戦略と成果とのつながりが不整合であったりということに気づくケースが実に多いという経験をしてきました．それらを整理して，経営としての目標と成果指標の整合性が納得できるようになり，各要素とその成果とも整合し，かつ，経営目標と各要素の整合性が整ってくるという場合もありました．更に，初めからこのようにやっていればもっと効率的に効果的にできただろうということが分かって，これからはちゃんとやろうよということでTQM診断後に，本格的にTQMが始まり実態としての効果が出てくるなどということを多く経験してきました.

実はTQMが真に役立ったと最も感じるのはそのような時でした.

形式的に目標・戦略，効果の整合性が整ったところで，次に問題となるのがその内容です．掲げられた経営目標が大変美しい言葉で高邁に語られているものの，抽象度が高すぎて，地球上のどこの企業でも 100 年後でも使えるようなものとなっており，実際には何をやりたいのかがわからなかったという例も散見されました．また従ってその効果が把握できないという例も，特に優秀といわれている企業では頻繁にお目にかかりました．そこで，すべての形容詞を取り払って，何をどうしたいのかという，具体的な解釈を加えてみるとやっと何をやりたいか，やりたかったかが見えてきたという例も多数経験しました．

あるいは，経営目標として売上高××，利益△△，市場シェア○○の達成などという非常に明快な経理的な数値目標を掲げている場合もありました．すると，それらに対する効果は表しやすいものの，それを達成することが，その企業にとってどのような意義があるのかはさっぱりわからないという場合も多くありました．経理数値は確かに経営を可視化する有力な手段ですが，それらが目的化してしまうと，経営目標の魂が抜け落ちてしまうと思います．経理数値目標は理念を実現するための指標にはなりますが，決して理念・ビジョンに代わるものではないと思います．

これらは，経営者あるいはそれぞれの部門長が確固たるビジョンを持てないでいるからではないだろうかと思っています．バブル期前までの日本の多くの企業は，方向性などのことは考えなくても，従来の事業をそのスコープの中で拡大すれば良かったという時期もあったかと思います．その時は，このような目標を設定し達成することで良い企業と評価されたかもしれません．ところが，その後，単調増加の時期が終わり，失われた 30 年と呼ばれる時代になると，トップが明確な方向性を出すことが以前とは比較できないほど重要になってきたのではないかと考えています．

TQM 診断を受けなくても，デミング賞に挑戦しなくても，定期的にこの３条件を見直してみることが，実は今の停滞している多くの企業に求められるのではないかと思います．

３．役に立つ日常管理と方針管理

日常管理と方針管理は TQM の中でも最も着目される管理のしくみであろうと思います．どちらも長い歴史があり各社で独自の進め方がされてきましたが，時に形骸化し，本来の意味を見失ってしまっている例を散見してきました．近年（一社）日本品質管理学会からそれぞれについて規格が出されて，その関係性が説明されています．

キーとなる説明は，次の２つの図です．

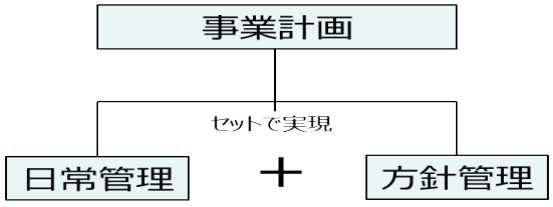


図１　事業計画と日常管理と方針管理の関係
日本品質管理学会 JSQC-Std. 33-001:2016「方針管理の指針」より

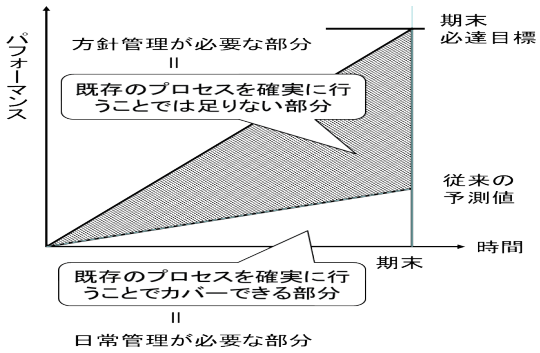


図２　目的から見た日常管理と方針管理の関係
日本品質管理学会 JSQC-Std. 33-001:2016「方針管理の指針」より

日常管理とは，組織が日々の業務を安定的かつ継続的に遂行するための管理方法であり，方針管

理とは，変化する環境の中で新たな方向性を打ち出して組織全体を変化させるための管理方法という位置づけで，両者は相補的な関係にあるとしています．日常管理が充実しているからこそ，方針管理による挑戦が可能となり，また方針管理が明確であるからこそ，日常の活動がしっかりできるという解釈です．

ところが，形骸化してしまってもはや無用の長物になってしまっていたり，肝心な時に使えない仕組みになっていたりする事例を散見しています．

例えば

日常管理に関して以下のような誤解に直面してきました．

「日常管理」を既に進めている企業で：

- 生産工程だけのものでしょ．
- 大量生産工程だけのものでしょ．
- 現場だけのもので上級管理者には関係ないでしょ．

あるいは，最近力を入れ始めた企業では

- 自分たちにとってはまったく新しいものでしょ．
- グラフや書類を大量に書かされるのでしょ．
- 現実とは違う美しい結果を書かされるのでしょ．

方針管理での誤解／誤用として以下のような例も散見されてきました．

- 近年の 20 年間の第一番目の方針は常に「売上高向上○○」が掲げられ，形容詞と数値以外は毎年同じで，具体的に今年何をどう変えたいのかがさっぱりわからない．

コロナへの対応の実際

日本で新型コロナウイルスへの対応が本格的になったのは，2020 年 4 月 7 日に初めて緊急事態宣言が発出された頃からでしょうか．その後も，デルタ株やオミクロン株の流行に翻弄され，ようやく日常生活が徐々に戻りつつある状況になったのは 3 年後の 2023 年 5 月ころからでしょう．４月７日と言えば，多くの企業で年度末まで多大な労力をつぎ込んで設定したその 2020 年度の方針が始動した直後です．本来の方針管理の役割から考えれば，このような大きな変化に対して，タイムリーに対応策を練り上げて，全社一丸となって乗り切るために方針管理は最適な手段ではないかと思います．ところが，当時，「出来上がったばかりの２０年度の方針の変更などできるはずがない」とか「コロナ対応で忙しくて方針管理どころではない」という議論を聞いたことがあります．一方で，毎週のように全社の実質的な活動方針を変更し，それを全社に展開してきたとはいうものの，それは方針管理とは全く別物の帳票も何もない「同調圧力」によるもので，一貫しているようでいて実はバラバラで非効率な活動をやっていたという例もあるかと思います．

- 「安全」は常に重要ということで，こちらは最近 50 年間方針の 4 番目として掲げられ，管理項目は重大事故件数，目標値はもちろん 0 ということで，50 年間毎月 0 を行進させている．
- 経営上の重要なことをすべて列挙しており，項目数が 50 以上になってしまう．
- 月次のレビューでも結果の数値以外は話題になることなどはなく，現場でも実質的には重視されなくなってしまう．
- あるいは本当に環境変化への対応が必要な時に役に立てていない．

私は，現場第一線だけでなく経営者においても，企業の業務のほとんどは，実は「日常管理」で

あり，そのベースの上で環境変化に対応したり，より積極的に自ら変化を起こしたりするための活動に「方針管理」を使っていくべきものだと考えています．

すなわち，方針管理項目という位置づけでありながら，上記のような定型的な項目を並べている場合もありますが，これらは日常管理項目と位置付けるべきだと考えています．

24 年に出版され今年日経品質管理文献賞を受賞した「実践　方針管理　―革新戦略推進のフレームワーク―」［日科技連出版社］の中では，下図のように事業計画を方針管理または日常管理へ区分けし展開する方法を提案しています．すなわち，日常管理の対象とするか，方針管理の対象とするかの違いは「重要度」の違いではなく「既存プロセスを行うことでは足りない重点的に取り組み達成すべき事項」であるかどうか，としてはどうかということを強調しています．それは，トップだけでなく，組織の各段階でそれぞれの段階の責任者が自分の立場で決めることであると思っています．

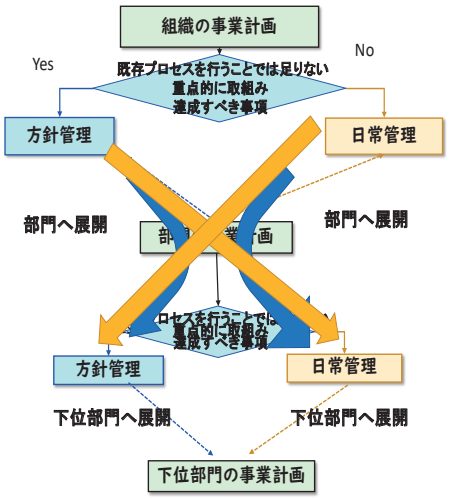


図３　事業計画を方針管理または日常管理へ区分けし展開するプロセス（概念）

従って，上位方針であっても自部門では日常管理の対象とすることもあれば，その逆もありうるという立場です．

次に，ある項目は日常管理でやろう，ある項目は方針管理でやろうと意思決定した後はどうなるのでしょうか．すなわち，実行計画，実施段階，月次・・・のレビューの段階では両者はどう違うのでしょうか．それらに違いが無いのならば，苦労して分ける必要は無いのではないでしょうか．更に言えば，日常管理の従来のプロセスではできないことを，方針管理に区分するとなぜできるようになるのでしょうか．多くの場合，方針管理項目にしたからと言ってだれか別の人がやってくれるわけではないし，方針管理という魔法の杖があるわけでもないでしょう．むしろ，日常管理項目は手を抜けばすぐにわかってしまうけれども，方針管理項目の中には実際の効果／影響があらわれるのは数年後なので，ついつい先延ばしにしてしまい気づいた時には手遅れになってしまっているなどという項目もあるのではないでしょうか．

上記の本の中では，方針管理項目とするからには，計画段階でも，特別なリソースを確保したり，実施段階でも月次レビューのやり方も日常管理項目とは変えたりするというというような提案がなされています．

方針管理は海外からも着目され，目標管理との対比などから議論されることがありますが，私は，日常管理と方針管理は一体として変化に対応しあるいは更に変化を生み出していくための積極的な仕組みとしては大変優れたものであり，もっと着目されても良いと思っています．

４．問題解決／課題達成と QC ストーリーの誤解

TQM において，問題解決／課題達成は中核的な役割を担っていると言えるでしょう．そこで中核となるものが「QC ストーリー」と呼ばれる基本構造だと思います．ところが，私は長年の経験の中で，この QC ストーリーが誤解され，形だけが独り歩きしている現実を数多く見てきました．

私が若いころ，クライアント企業の方から問題解決事例のまとめ方，特に報告資料のまとめ方のサポートを依頼されることがよくありました．拝見すると，「細かい対策内容」と「実に見事な多く

の効果が出た」すごいだろうというご説明いただいた後に，さて，テーマはどうしたらよいだろう，現状把握にはどんなデータを出して，特性要因図はどう書けば良いだろうというご相談が多かったわけです．

「ちょっと待って，その対策の内容は素晴らしいもののようだけど，それは何処から来たのですか，それを導いた論を書けば良いのではないでしょうか」ということを申し上げると，多くの場合大変困られてしまいました．実は，多くの場合その対策は誰かからのアドバイスを鵜のみにしたものであったり，いろいろやった対策の一つがたまたま当たったりしたもので，なぜ当たったのかもわからないので，QC ストーリーのような整然とした論理に基づくものではなかったからです．

QC ストーリーの詳細説明はいろいろな参考書がありますが，ひょっとすると QC ストーリーとは，改善を進めるための手順ではなく，改善できた結果を格好よく報告して褒められるためのもの，逆に言えば，改善事例が QC ストーリーに沿っていないと厳しく叱責されるものであるために，実際とは違っても美しく見えるような報告書として提出するための形式というような誤解をしていないでしょうか．実際には使っていない特性要因図を報告書をまとめる段階で書き始めるなどというのはこの典型でしょう．

TQM 導入の初期の段階で現場第一線の皆さんの全員参加の機運を盛り上げようという意図の時はそれでも良いかもしれないですが，そのような活動が長く続くと現場の創意工夫の風土自体を損なってしまい逆効果ではないかと思っています．まして，普段は事実データを重視して，論理的に仕事をしている方々にこのような形を押し付けるのは百害あって一利なしではないかと思います．

ただし，本来の QC ストーリーとは，実は素晴らしいものだと思っています．森羅万象世の中の色々な問題／課題に対して現在提唱されている 4 つのアプローチ方法に従えば何とかなってしまうというのものだからです．私のようなその現場の門外漢であっても，この手順に従うと，現場の皆様に有用なコメントを差し上げることができるようになってしまうという大変強力な武器であると思っています．

ただし，現場の実際の問題解決活動では，QC ストーリーに沿った，正統派のアプローチだけでなく，K.K.D.（経験と勘と度胸）による改善と呼ばれる活動や，それ以前に J.D.I.（Just Do It）気が付いたらすぐやればよいという活動もたくさんあると思います．その発生比率は安全におけるハインリッヒの法則になぞらえるならば，1：30：300 という感じで，実は圧倒的に K.K.D. J.D.I. の方が多いのではないでしょうか．ところが，それらをそのまま報告すると，QC ストーリーに乗っていないということで受け入れてもらえない場合もあるかと思います．

改善活動を促進していくためには，正統派の QC ストーリーに基づく改善だけでなく，K.K.D. J.D.I. による改善活動もそれなりに評価して推進していくのが良いのではないかと考えています．特に，近年，情報技術が発達し AI も活用段階になってくると，以前のどこかで同様な問題があり，既に効果が確認された対策が提案されているという場合も少なくないでしょう．それらを効果的効率的に活用できるようにするにはどうしたらよいか検討してはどうかと考えています．

5．デミング賞の将来についての雑感

デミング賞は，単なる表彰制度ではないと考えています．デミング賞というしくみが，TQM が自らを変革し続けるための学びの仕組みであり，発展させていくための大きなドライビングフォースであると思います．その価値は歴代の受賞企業の歩みによって形づくられてきたと思います．デミング賞はその長い歴史の中で，優良企業が受賞し，かつ，受賞後も大いに発展し世界からも認めら

れる企業に発展してきたこと，海外からの受賞企業も同様に世界的な企業として認められたことから，その価値が認められてきたと思います．

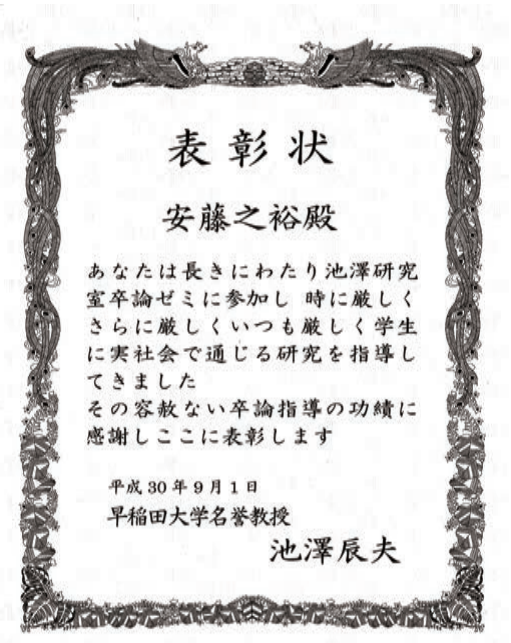
近年，海外からの応募企業に対して門戸を狭めて，特に大企業からは応募しにくくする工夫が進んでいることには，個人的には大変な懸念しています．大企業の診断・審査を実施することは，審査委員会として大変なエネルギーが必要であることは確かですが，審査委員会のエネルギーが足りないために応募組織に対する門戸を狭めるのではなく，審査委員会としてのエネルギーを育成して賞自体の発展を望みたいところです．

6．結びに代えて

先日，早稲田大学のある学科の卒業生の内 40%程度がコンサルタント企業に就職することになったという話を聞いて隔世の感がありました．私の時代は，コンサルタントとは長年の経験を積んだ熟練者がなる職業だったからです．私自身は修士課程修了と同時に，特定の組織に勤務せずにフリーランスのコンサルタントとなったという，当時としては実に風変わりなキャリアを進んできましたためです．経験豊かな経営者管理者の方々に対して質問したりコメントしたりすることは，生来気の弱い私にとっては身のすくむような緊張の連続でした．クライアントの皆様も，こんなわけもわからない若造の相手をしなければならないのかと不満に思われていたことだと思います．その皆様に曲がりなりにも受け入れていただいた裏には，後見人である狩野紀昭先生，池澤辰夫先生をはじめ多くの先生方のおかげがあり，まさに虎の威を借りてコンサルティングをさせていただいてきた次第です．私の前にはまさに失敗の山が累々と築かれています．その間にご迷惑をおかけしてきた多くのクライアントの皆様には改めて感謝とお詫びを申し上げます．

クライアントの皆様から学ばせていただく間に，狩野先生・池澤先生の卒論ゼミにも 20 年間以上にわたりほぼ毎週参加させていただきました．両ゼミでは，理論的な研究だけでなく，学生をインターンのような形で企業に派遣し，現場の実態からテーマを設定して，その解決をはかるという研究形態がありました．

学生諸君は実社会の荒波に触れてうろうろしながら実習してきて，その結果をゼミで報告すると，今では××ハラと言われかねない厳しい指導をいただきながら，論文をまとめるだけでなく，社会で生き延びていく術を育成されていました．私もそのような荒波の中で，実際の現場を学生諸君とともに裏から学べたことはとても大きな経験でした．ちなみに，先生方からの厳しいご指導で憔悴しきった学生諸君を，「優しいお兄さん（後にはおじさん）」としてやさしく温かく支えるのが私の役割でした．池澤先生のご卒寿のお祝いの時に，その貢献について「表彰状」をいただいたので，それを紹介させていただき結びとさせていただきます．



表彰状

安藤之裕殿

あなたは長きにわたり池澤研究室卒論ゼミに参加し 時に厳しくさらに厳しくいつも厳しく学生に実社会で通じる研究を指導してきました
その容赦ない卒論指導の功績に感謝しここに表彰します

平成30年9月1日
早稲田大学名誉教授
池澤辰夫

２０２５年度

デミング賞特別功労・実践賞
受賞報告講演要旨

David Hutchins

Chief Executive, David Hutchins Innovation Limited

Presentation abstract of

The 2025 DEMING Distinguished Practice Award

DAVID Hutchins - Chief Executive, David Hutchins Innovation Limited

1. My Profile

I am David Hutchins, born in London UK on 7th August 1936

Foundation Background

My primary education was seriously affected by the events in London during World War 2, which then impacted on my secondary school education. School leaving age in those days was at 15 years, after which I left school and entered the world of work with no qualifications of any kind.

Fortunately, I was able to achieve an apprenticeship in the iron foundry Industry, followed at the age of 22 by two years conscripted service in the British Army. It was during that time when three successive intelligence tests showed that I had a high intelligence quotient (IQ). On demobilisation I decided to put this information to the test. So, I did not return to the foundry industry but was engaged as a trainee in a design department. I then began intensive self-education in my own time: I registered to attend educational courses for three evenings per week for 3 hours on each of those evenings, plus a great deal of homework. It was during this period that I me my wife, Margaret. We then got married and raised two children.

My self-study lasted for 8 years, and I obtained distinctions in most of the examinations and succeeded in obtaining Degree equivalents in both mechanical and production engineering, and later, electrical engineering. Six years later, I obtained sabbatical leave, which enabled me to successfully achieve a master's degree in quality and reliability engineering at the University of Birmingham, UK.

In my work, I quickly moved on from the Design Department to Work Study, Production Engineer, Chief Production Engineer, then Works Superintendent, in a high-volume precision automotive components factory in the UK from 1962 to 1968.

As Production Engineer, it was my job to attempt to minimise production costs and product defects. I did this by implementing many of the concepts that I had been learning at evening classes, in particular Statistical Process Control both in the factory and in the process of new plant procurement, traceability of measurement using gauge control and building a Standards room. We also had a Chief inspector (the term quality manager was not common in those days), whose job it was to stop whatever defects we did produce, from reaching the customer. I was also responsible for managing wages in a payment by results work environment, terms and conditions of employment and dealing with three very powerful trades union representatives at a time when industrial relations in the UK were amongst the worst in the world.

During that time on the Production Engineering course, when studying Work and Methods Study, I also learned a variety of tools and techniques that have in recent years found their way into what Westerners refer to as Lean! I could not and did not realise at that time just how useful all that practical experience would be in my future career.

2. My Total Quality Management (TQM) Journey.

In around 1967/68 the sudden emergence of the 'Japanese Quality Revolution' began to impact on our business and that of our clients the motor manufacturers.

There were many theories (or excuses) that were popular, as to how Japanese companies were suddenly capable of high-volume sales into the UK market. Typically, 'The Japanese live on a bowl of rice per day' how can we compete with that? As a scientifically trained production engineer, I thought that this theory was rubbish and that those around me became very aware of my views. I saw that to be able to produce vehicles that were of significantly better quality than our own was more likely to be a production engineering achievement than the excuses being offered in the West, which I saw as being procrastination and arrogance.

One day in 1968, one of our workers, a keen motor cyclist, had somehow managed to obtain some Honda pistons from a dealer's store, and he gave them to me. We tested them in our laboratory, and they were even better than the specification in the relevant British Standard.

My reaction was: **How do they do that!** I was determined to find out and that was the start of my TQM journey.

I left Industry and began a new career teaching Quality as it was practiced in the UK but still, I knew very little about Japanese Quality Management.

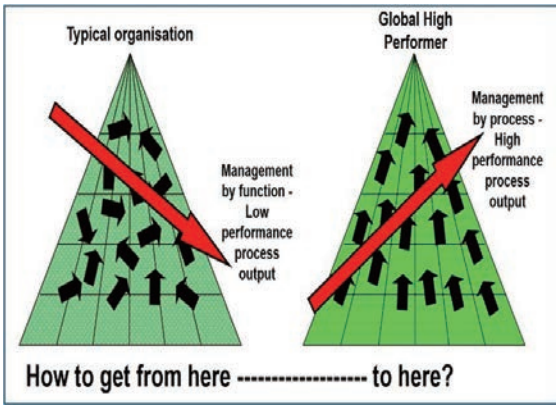
Then I had a breakthrough! I met a Japanese Professor in the UK (Professor Naoto Sasaki) a specialist in economics from Sophia University. I told him of the difficulty I had in finding anything written in English that explained the Japanese Approach to the manufacture of high-quality products. Professor Sasaki happened to be an acquaintance of Professor Kaoru Ishikawa. Soon after that Professor Ishikawa sent me a copy of 'Reports on Statistical Application Research, published by the Union of Japanese Scientists and Engineers, amongst other documents including 'Korio to QC Circles'.
Paraphrasing Ishikawa's definition of TQM he said:

> **In our approach, each person on the payroll is the expert in his or her own job. The goal is to use the collective thinking power and resources of everyone to work towards making our organisation the best in its business and to bring out man's infinite capabilities.**

Analysing this definition, my thoughts were: '**In our approach, each person on the payroll is the expert in his or her own job.** (*In the UK, the workforce was typically treated as being extensions of their machine or desk. They received the minimum of training and sometimes none, 'just copy the next operator'! Colloquially referred to as 'the sit by nelly' approach. They frequently knew very little beyond the specific task they were performing or even the purpose of the finished product.*)

'The goal is to use the collective thinking power and resources of everyone to work towards making our organisation the best in its business' (*Even to this day, many staff and even many managers have little idea as to the Vision and Mission of their own department, let alone the whole company or share in the means of trying to make their company the best. Just do your job according to instructions to get a tick in the box by a professional auditor.*)

'….bring out man's infinite capabilities.' (*this would be extremely rare given the typical Western approach to managing the workforce!*)



The contrast between the Japanese approach (shown on the right) and that of the UK and possibly most of the rest of the Wesern World was in my opinion huge.
With my earlier experience in a high volume manufacturing environment, the contrast between what I now perceived to be Japanese practice and that of the UK and probably the West generally, was stark.
However, I could not see anything that I considered to be culturally dependent that would prevent replication in the West, and this was the start of my journey into consultancy and training to attempt to mirror the words of Professor Ishikawa. To achieve this, whilst I realised that the Vision was important, the real challenge was in the 'how to'!
In the UK, almost all high volume production, and much of the rest of industry generally, was and still is largely modelled on the American system of the 'management manages and people do' principal, often referred to as the 'Taylor System' after one of its pioneers Fredk W. Taylor, in the early 1900s. The workforce was to be treated like robots, nobody asked them anything, nobody involved them in anything, they were rarely ever praised, and in most cases, regardless i=of inherent intelligance, they had ti hang their brains on the gate when they went to work and pick them up again when they left to go home. In many cases competition between departments was more severe than competition in the marketplace with competitors! This system was vigorously resented by the workforce and the degree of visible labour unrest resulted in the UK being labelled 'the sick man of Europe'.

I was deternined to attempt to encourage the change of this and it has been the focus of the rest of my life's work. I began to attempt to encourage the change of this and it has been the focus of the rest of my life's work. I began by conducting short courses on my perception as to how we might change it. The courses were well received but the participants were not of a high enough status in their organisations to convince anyone at the higher levels to attempt to make changes. I had to do something to attract the key decision makers.

It occurred to me that the only way I could do that would be to invite Professor Ishikawa to the UK which I did. I organised a 3 day conference in London in 1979.
To be sure of attracting Business Leaders,
I also invited keynote addresses from The Government Minister responsible for Industry, the Head of the Ministry Defence Procurement Executive, a well known Chairman of a leading UK Domestic Power tools company and also the Quality Manager and a Trades Union representative from Rolls Royce Aero Engines who I knew to have implemented a version of Quality Circles. As a consequence, I also managed to interest the editor of the Management Page in the Newspaper 'Financial Times' who published on 28thy August 1979 a centre spread 'Rolls Royce sharing in the secrets of Japan's success'!

The conference was a great success. We were inbterviewed on BBC World Service Radio and many large British companies wanted assistance. I could not do this from the College where I then worked and so was forced =to become independent and have remained so ever since.

3. Japan Study Missions

During the conference, Professor Ishikawa questioned whether it was possible for us in the UK to implement TQM as it had been established in Japan.

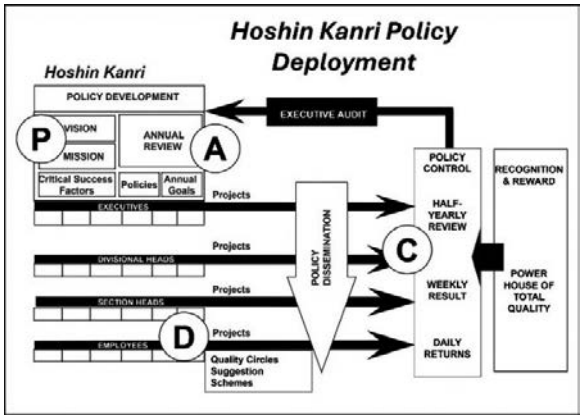
He used the analogy of intelligent 'frogs in the well'. He said that if frogs had lived for generations at the bottom of a deep well and you attempted to explain birds, bees, sheep, mountains and trees to them, they would not be able to visualise them never having seen them. I could see the sense in that and soon after the conference, I oganised a Study Mission to Japan in cooperastion with JUSE, just for my wife and myself. We visited amongst others Nissan, Honda cards, Toyota, Nippon Denso, Matsushita Electric . This was trhe first time I had seen Just in Time (JIT) or even heard of it. Also SMED (Single Minute Exchange of Dies) as being for me the two most visible aspects of TQM.
At that time, automotive manufacturers in the UK were so far removed from JIT that typically they had several months of stock of some items and were often out of stock of others. It was common, almost daily practice, on a vehicle production line, to become out of stock of say, wing mirrors. They would not stop the line because of that but since the vehicles were not saleable without them, they would put them in a reserved place in the stockyard outside.
Possibly before the replacement stock had arrived, maybe they then ran out of hub caps or some other components. So, they now have a growing stock of unsleable vehicles with multiple deficiencies. To deal with this they would hire students at weekends to find the missing parts, and they would be paid for each vehicle the students had made saleable. In a well known, high volume manufacturer of cycles, the production foremen each morning would meet in the incoming goods store to check what parts they had in stock to decide which models to make that day!

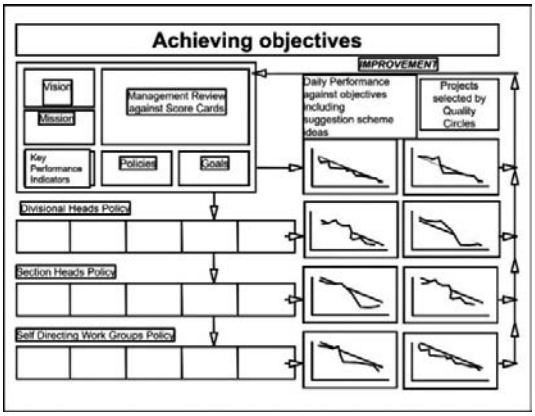
In terms of SMED, major car manufacturers would only make one model on a specific production line because to switch to another it might take a minimum of a few shifts to tool up, but more often, it might take several days or longer. So, they would produce as many as they could in a production run and just store them in the finished products yard in the hope they could find customers for them. This was referred to as 'economies of scale'!

When I returned home and explained what I had seen to Business people they did not believe me, thought I was exaggerating! So, this is when I began Industrial Study Missions to Japan, as Professor Ishikawa had suggested. It was on one of the early ones of these when I first learend of Hoshin |Kanri and how it worked.

Not only was I contemplating taking Study Missions to Japan, but JUSE and wanted to send teams to the UK to study our work culture prior to any companies investing in setting up plants there. It occurred to me on onsuch early visit when we already had a few companies with QC Circles to conduct a one day event at the BAFTA centre in London where we had a day with Japanese Quality Control Circles presentations alternating with British ones.

The event was a great success but it was obvious that the Japaese temas were far more focussed on matters important to their companies than was the case with the British teams. I wanted to know how this could be. Fortunately we were about to take a group to Japan. Whilst there we





were lucky enough to visit a Komatsu planit in Osaka. There we were given a lecture on Hoshin Kanri showing slides of what they referred to as 'their flagship model.

I could understand from this how it was that Japanese Quality Control Circles were made conscious of company goals and objectives and the full integration of TQM.
At around the same time, I was contacted by Dr Juran who wanted to meet me in London. He explained to me that he had created a series of videos designed to support project-by-project improvement. It was obvious that his programme was aimed at management level people and not the workforce. I explained what I was doing and that I was not prepared to compromise my beliefs based on my Japan research just in order to make money. He respected that and gave me a set of his video tapes to review before entering into an agreement. When I reviewed them, it was clear that they did not violate anything, and I entered into an agreement.

Interestingly, it was my observation that the materials and training process we had developed as a consequence of my dealings with Professor Ishikawa and JUSE enabled us to present a more attractive service to clients than even the Juran Institute, and for three successive years, we sold more Juran materials as part of our programmes than the Juran Institute and all of their other representatives worldwide, put together!

4. The 1980s generally
Through the 1980s our reputation in the West spread fast and soon I was winning contracts overseas. We were told that one of the large multinational Consultancies had a file on us which included the comment 'a small company with a large market share'!

Two important examples of these were contracted through UNIDO and paid for by World Bank. The contracts comprised 12 companies in Egypt and a similar number in Tunisia. At around the same time, I was sponsored keynote speaker at the inaugural ceremony for the South African Quality Institute (SAQI) in Pretoria where I made the opening address and Frederik Willem de Klark the outgoing Prime Minister, closed the event. During the visit, I appeared on a South African Breakfast TV Show and was given a one hour slot on a live radio programme answering questions form listeners on quality related topics. I similar programme also occurred during my work in Tunisia which resulted in the Government launching a Company wise TQM programme.

During that decade and into the 1990s the companies that I had worked with to help them implement TQM included:

UK Companies (a selection)
Brinton's Carpets, Marks and Spencer's –Headquarters plus many suppliers, Mullard, Wedgwood – also hosted a JUSE study mission to the UK organised by me. Chloride Shires, Ideal Standard, Johnson Bros., Tioxide, Paragon Laundries, R.J. Heinz, ICL (Computers), Cabot Carbon, Rylands Whitecross, Duracell Batteries, Environment Agency, Edwards High Vacuum, Lucus Engineering, Rowntree Mackintosh, Carneau Metal Box, Abbey Hosiery Mills, Mansfield Hosiery Mills, Lotus Shoes, British Oxygen Company, Shell, Castrol, Jet – Oil refinery

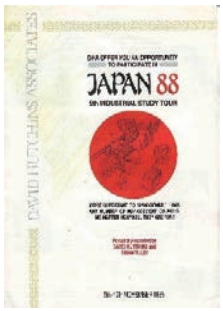
Continental Companies included: Molnlycke - Sweden, Belgium and UK Medicor Hungary (1983 whilst in the Soviet bloc), American Express - Germany and France, Nokia – Finland, Rkioski – Finland, Stockman – Finland,

Badger Engineering – Holland, DSM – Holland, Carneau Metal Box – France, Grundfos Pumps – Denmark. Ford Motor Company – Germany, Sulzer Bros. Switzerland.

Middle East and North Africa. Egypt and Tunisia (12 Companies in each country on a UNIDO Contract funded by World Bank). Industries – Salt and Soda production, Textiles, Dairy Products, Cement manufacture and steel making.

It was also during that time when Dr Noriaki Kano invited me to give an evening lecture to his evening class students on how I had managed to progress from zero qualifications when aged 24 to the development of my career at that time and that I had progressed from being a foundryman to international speaker. Dr Kano's objective was for me to encourage them to believe in themselves even if they have also missed out in their original school education and that everything is possible if you work at it.

My own conferences



In October 1984 on the day that Mrs Gandhi the Indian Prime Minister, was assassinated, I conducted the first of an ongoing series of TQM conferences in London at the Waldorf Hotel opposite the Indian Embassy. These became an annual high-profile event on London and I ran them until 1992. All the speakers at these events were my company's clients and we simply provided session chairmanship and administration. Typically, we attracted approximately 150 participants for each event at prestigious venues. Many of the participants were in the relevant speaker's supply chain and consequently, many were afterwards eager for my colleagues and myself to help them implement TQM. I call it a golden age!

In parallel with these we also conducted the 10-to-12-day study missions to Japan in collaboration with JUSE. Participants at these events were eager for us to help them implement what they had learned. With both these and many of the participants at our conferences, we attracted sufficient business for TQM implementation for me to employ some 15 consultants who I had previously trained.

During that period, I had also been invited by JUSE to give some lectures in Japan. I was Chairman of the Human Factors committee of the European Organisation for Quality for 6 years, Chairman of the Chartered Institute of Quality (CQI) Human Factors Special Interest Group (SIG), a committee member of the CQI Professional Activities committee, a co-author of its Body of Quality Knowledge (BoQK) and the author of several books on TQM. Also, many magazine articles.
I also wrote an obituary to Professor Ishikawa that was published in the Daily Telegraph and the Independent UK daily newspapers.

5. The 1990s

Initially the 1990s started off much as the 1980s finished, but within 2 years, everything related to Quality Management changed dramatically because of a massive global recession. Factors that caused it included the collapse of the Soviet Union resulting in a huge reduction in Western Defence spending, uncontrollable inflation, and negative equity. Growth in the Japanese economy had been dependent on increasing sales to the West which had slowed down abruptly. In order to survive many Japanese companies clamped down on investment and spending.

Most of the West also ceased investing in the development of TQM and the West generally lost interest in anything other than survival. My company could not attract participants for our conferences or our study missions, so we were forced to clamp down as well.
Fortunately, there was sufficient work to keep going, but we were forced to become very frugal and not take risks. This was followed later by the Lehman Brothers disaster and then by covid.

Fortunately for us, at the end of the 1980s, our Prime minister Margaret Thatcher told all the State-owned companies which were loss-making, that they had just three years to make themselves profitable and find a buyer or the Government would close them down. One of these was Short Bros. Aircraft manufacturer which had apparently been losing an average of £250m per year for the last consecutive 15 years! The CEO contracted with me to assist them to implement TQM as their means of survival. In the first year they made a small profit from our work, the second year,

a few £million. In the third year, it was £450m, and they found a buyer, Bombardier from Canada and they survived. Following that, I also VSEL, the UK Nuclear Submarine manufacturer and the UK Division of H.J. Heinz food processors. I have video recordings by the BBC of both Shorts and Heinz. These were two of a series of 5 30-minute tapes produced by a Branch of the British Broadcasting Company (BBC) entitled 'BBC Select'. The videos were intended to be broadcast overnight and received on specially modified Video recorders to be used by members of its 'Executive Business Club'. I was appointed Technical Advisor and in fact wrote the scripts for all 5 recordings.

The titles being
1. An Introduction to TQM,
2. ISO 9000(featuring Courtauld's celluloid sheet making plant.
3. Short Bros. Aircraft construction.
4, Heinz Food Processing (featuring QC Circles) and
5. Benchmarking – this tape used examples taken from the former 4 tapes. I have copies of all of these.

Also early in the decade, we were approached by JUSE to assist with the implementation of ISO 9000 in Japan. Although I was an approved trainer in this field, I preferred to concentrate on the implementation of TQM and decided that it would be beneficial for the development of my own organisation, for some of my colleagues who specialised in ISO 9000 to conduct the training. So, over a period of approximately 2 years, colleagues of mine on my payroll, visited Japan on a regular basis to assist with the establishment of ISO 9000 in the country. Here are some links to relevant videos:

- Tape 1 of the BBC series https://vimeo.com/user5925873/tqm-tape-1-what-is-tqm
  Two further videos related to this history-
- ICQCC Bangkok 1990 https://vimeo.com/436159006
- Carneau Metal Box – TQM Introduction by me – https://vimeo.com/436159006

Later in the decade (1997), I was approached by an Iranian Steel producer - Mobarakeh Steel. They asked me to help them implement Total Productive Maintenance (TPM) I toured the Plant (a Gemba walk). This took 3 days. I then reported to them that they should consider implementing TQM first. They were uncertain of my advice and did not take it initially. However, a team of them visited Japan and visited both v Nippon Steel and JUSE. I was told by them later that that they reported to JUSE the advice that I had given to them. Apparently, according to them, somebody from JUSE told them 'if that is what David Hutchins told you then we recommend that you take his advice because he knows what he is talking about! I was very grateful when this was fed back to me, but it was also a bit scary. They literally did everything I told them to the letter. I thought, well, if it fails for whatever reason, they are going to blame me! Fortunately, it did not fasil. In less than 3 years they had increased steel production from 3million tonnes a year to over 4million tonne, with no additional capital investment, and on the contrary, they claimed to have saved over $220m in production costs. They had also progressed from being number 24 in the world for iron making to being included in the top 4!

Unfortunately, the international sanctions that were imposed on Iran prevented me from going there again! But I keep in touch and was told last year that they were now producing over 11.8m tonnes of steel a year!

Also, during the 1990s I was a key presenter at the ICQCC events in Hong Kong in 1993/4 (I also presented at the ICQCC events in Beijing and Bangkok). Following my presentation, a Quality Circle of five 10-year-old children made a presentation to the 1500 participants. They were from the City Montessori School in Lucknow India. Apparently their now deceased Principal, Dr Jagdish Gandhi, had been a participant on a tour to Japan and experienced TQM. He decided to model the management of his school on the principles that he had learned. I suggested that he should conduct a conference at the school to let others see what he was doing. They took my advice and have been conducting conventions every 2 years since then. In have attempted to encourage them to make a connection with JUSE, but to date, that has not happened, but I have not given up trying!

They have names Halls in the school named after Professor Ishikawa, Dr Juran, Dr Deming the late American Don Dewar and me.

6. The new millennium.

Initially my work continued as before until in 2008 when the CEO of CQI commissioned me to create a whole new Diploma to replace the one they had. There were many criticisms of the old one the main one being that it was too engineering orientated.

The main Terms of reference for me were:

The content must be generic. Not biased towards any particular industry.
There were two qualifications.

1. A Level 3 qualification (Approximately school leaving certificate)
2. A Level 5/6 qualification. This would be the equivalent to a Batchelor's degree.
3. It must be approved by the UK Government body 'The Office of Qualifications and Examinations and Assessments (OFQUAL).

This took most of my time over 2 years, but it proved successful and went live in September 2010. It ran for 5 years until 2015 and had attracted some 4000 students.
Sadly, the bureaucracy demanded by OFQUAL proved overwhelming and required the services of more support staff than was commercially possible. So, they abandoned OFQUAL and broke the Diploma into small segments. I made a different decision.

Having designed it, I was also very concerned about some features in the courses that were imposed on us in particular the Examinations process, Supply Chain Management had not been accepted because it was in the course of a different Institution. This and other reservations made me decide to make whatever changes I thought appropriate also abandoned OFQUAL and my version has been running very successfully since 2015. We have a partnership arrangement with the CQI, so our qualification is still a route to professional membership of CQI and now it is my core work mentoring our 'blended learning' students.

However, I have always kept an eye on the global market and since COVID, I have detected on Linked In and elsewhere signs of a small, but I think, I have detected a small but distinctive return to TQM. To encourage this, we in DHI, approached JUSE in 2023 to consider recreating our Study Missions. We conducted the first revival event in May 2024. It was modestly supported, but sufficient to attempt another also with the assistance of JUSE. This proved similar to the first. The reaction of the participants was impressive, and we are convinced that now having reestablished them, they will grow. The number of people who attended ICQ was also very encouraging. I think TQM is about to reemerge globally at last. Fortunately, there are still many Japanese companies that never gave up. I guess that in the West, everyone knows about Toyota, and we are trying to convince them that there are many more companies who base their managerial approach on TQM than just Toyota.

7. My special thinks to my many friends in Japan and JUSE.

My special thanks go to my many friends in Japan and JUSE who have supported me all the way even when it has proved difficult for whatever reason. I would particularly like to recall some dear friends from the past, whose memories are constantly in my mind. There are very many, and I want to be forgiven by those who I do not mention and hope that they would realise that they are not forgotten and these remarks represent them as well.

The dearly departed: This includes my first ever contact Professor Naoto Sasaki of Sophia University who first introduced me to Professor Ishikawa and who taught me so much about Japanese culture. Junji Noguchi-san, MD of JUSE who jokingly frequently referred to me as 007! Miyauchi-san, who was often a member of JUSE teams I had been working with. I could call him a Sensei as I learned so much from him. Dr Kondo who was ever present at international events I was involved with, and of course, Professor Kaoru Ishikawa, without whom my entire life would have been completely different.

Mentioning living people will prove difficult as there are so many. I will only mention the most relevant to my current work. These include, Dr Noriaki Kano, Masato Onodera-san, Kazuyoshi Maeda-san, Dr Hiroshi Osada-san for guidance towards this pinnacle in my life. I could not overlook my wife's and my dear friend Yumiko Kawashima to whom we owe so much and over the years we have known her, nothing has ever been too much trouble, also her colleague Kenji Nishikawa-san. I would also like to mention Hitoshi Kamikubo-san who I have lost touch with recently, and who gave me considerable encouragement in the latter part of my career.

Finally, to all members of the Deming Prize committee who have taken so much trouble to review my history and background and make the decision that I am worthy of this most prestigious Award, which I shall respect and cherish for the rest of my life. I am very grateful.

２０２５年度

デミング賞
受賞報告講演要旨

Global Indian International School, Tokyo

1.Outline of the organization

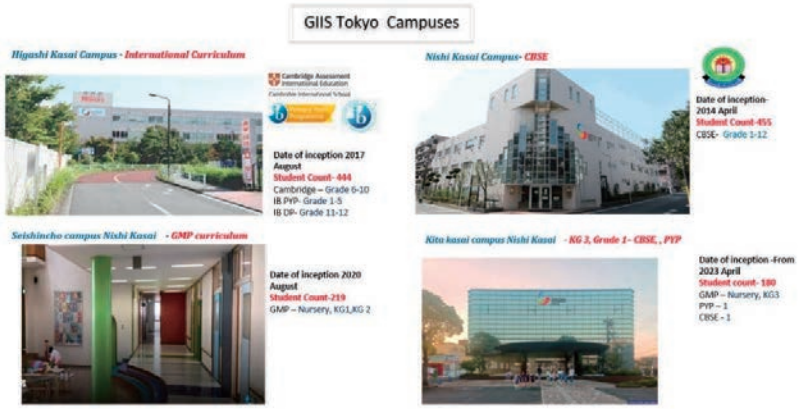
1.1. School Overview

Global Schools Group Outline

Global Indian International School (GIIS) is a part of **GSG** -Global Schools Group https://globalschools.com/ which is one of the largest conglomerates of education institutions in ASEAN & MENA Region which is dedicated to providing world-class education to learners across the globe and shaping their futures in a global landscape. Currently the group has 64 campuses in 11 countries with a total of more than 45000 students and 5000 plus faculty. The Senior Leadership Team (SLT) managed from corporate office Singapore oversees the overall performance of all GIIS and other brands through their accomplished management approaches aiming to become a global role model for teaching and learning. GIIS culture promotes the attainment of the school's Mission to nurture our global students into leaders of distinction committed to the spirit of excellence, with high quality education imparted to them by globally experienced and caring teachers, building strong virtues and values and focusing on all round development, creativity and entrepreneurship. GIIS is a private educational institution, and as such, it is not publicly listed on any stock exchange.

GIIS Tokyo

Fig1.1a GIIS Tokyo campuses



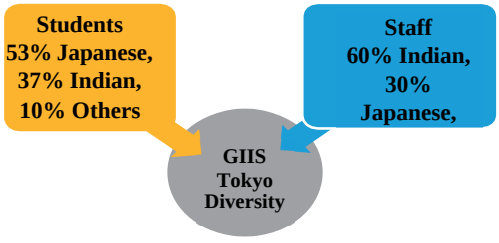
GIIS Tokyo is a private international English medium school situated in Tokyo metropolitan area in Edogawa Ward. Currently the school has more than **1394** students with over **170** employees. The school has **4** campuses all situated in a span of 3 kilometers. Each campus has around 400 students. The student demographics is diverse including around 50% Japanese and the rest including students from other nationalities like India, Korea, China, Russia, Sri Lanka, America Nepal, etc. Our employees are also diverse including members from Japan, India, UK, Iran, Korea, Malaysia, China etc. Compared to other international school in Tokyo, GIIS is different because it focuses on different curricula offerings. GIIS Tokyo Offers both international and Indian curriculums namely Cambridge, IB and CBSE (Central Board of Secondary Education, India) for students to choose from.

Education levels and segments offered

GIIS Tokyo is a full-fledged school offering services from age 3 onwards till age 18 which also means that students joining the school can continue in the same school till they graduate from school. (Unlike public school system in Japan which has separate schools for each segment.) This makes a longer life cycle of a student in the same system.

Fig 1.1 b Education levels, segments & Curricula offered

Fig 1.1.c Student and Staff diversity



Direct stakeholders of GIIS Tokyo:	Indirect stakeholders of GIIS Tokyo:
• Expatriate parents and students • Local Japanese parents and students • Employees	• Academic board like CBSE, Cambridge, IB with whom we are affiliated • Society who will benefit from contributions made by graduates of our school

Market Segment:

The Japanese community, along with Indian Expatriate community and other international community constitute our principal market segment, as they find our expertise in English, Math and Information Technology teaching of a high standard. Segmentation has been handled in the most precise and meticulous manner to ensure that every child gets a perfect ambience for learning.

1.2. Unique Selling Points of GIIS Tokyo

Unique Selling Points ***(USP)***of GIIS Tokyo include

- **Multi curricula offering**
- **9 *GEMS* -Co-curricular -Holistic Development**
- **Global Edge**

Fig1.2. a 9 GEMS model

Mutli Curricula Offering – As the only school in Tokyo offering 3 different curricula including accredited Indian curriculum CBSE (Central Board of Secondary Education) and International Curricula, Cambridge and IB(International Baccalaureate), GIIS Tokyo offers the freedom to students to choose the curriculum of their interest and ability and their university major choices.

9 GEMS embedded scholastic and co-scholastic education gives importance in refining the varied interests of students according to their abilities and skills apart from the basic education The 9GEMS framework integrates diverse skill areas, including sports excellence, leadership development, fine arts, creativity, visual arts, community service, public speaking and drama, universal ethical values, and academic development. This holistic development is achieved through programs thoughtfully embedded within our annual curriculum, ensuring each student's growth across these key areas.

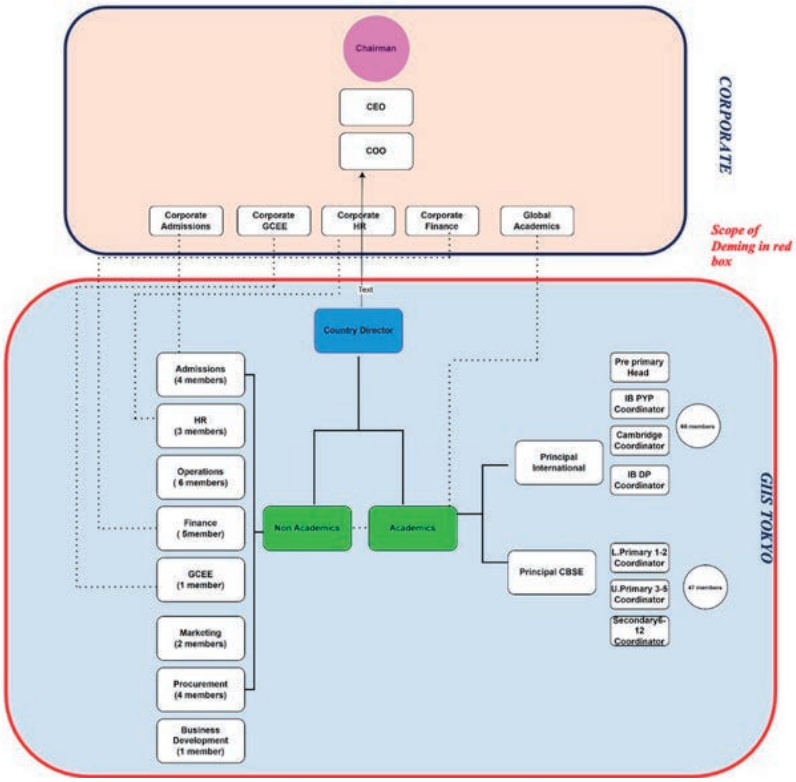
Global Edge- This means, the advantage of GIIS Tokyo as it is the only school in Tokyo which is a part of an expansive umbrella of global schools' group with spreads across 11 different countries and 64 campuses around the world with 12 various school brands and one interconnected global school community. This helps to learn and share the best practices across the family schools not only for students but also for educators and leaders.

1.3. Organization Structure

Organizational structure GIIS Tokyo consists of Country Director Japan and Senior Principal at top leadership level in Tokyo and principals for each curriculum followed by various departments and functions and layers relevant to the department. Some of the functions are overseen by corporate management, some of the functions are managed in Tokyo. The scope of Deming Examination is highlighted in the red box below.

Fig 1.3.a Organizational Structure of GIIS Tokyo

GIIS Tokyo Org Structure Including Corporate Team



1.4 Quality Accreditations

As a school focuses on quality, we emphasize processes and procedures. We have been certified with ISO 9001: 2015 from 2018 onwards. Further we have been certified with ISO 45001-2018 and ISO 21001-2018.
GIIS Tokyo has received Business Excellence Awards and recognitions from bodies like Indian Merchants Chamber-Ratan Bajaj National Quality award (**IMC- RBNQA**) in 2017 as well as in 2019 for embracing education excellence. Further to that school has been recognized by Asia Pacific Quality Organization (**APQO**) for adopting Business Excellence Models and practices. Business frameworks like Deming, and Malcolm Baldridge and **EFQM** has helped school to accomplish the incorporation of Total Quality Management.

2.Organizational Objectives and Goals

2.1 Overall School Objectives

Our Direction and path

Senior Leaders at Top corporate level have laid down the path for determining action plans towards accomplishing the intended purpose or desired outcome.

Vision: Our vision is to become a global role model for teaching and learning. We believe no child should be deprived of opportunities to excel in life and should have access to a world-class education.

Mission: We aim to provide quality and affordable education across the world and bring strong virtues and values leading to the holistic development of each student. Every student that is a part of Global Schools Group encourages creativity and entrepreneurship among its students. We want our students to leave the campus as leaders of tomorrow.

Core Values: Core values are branched from basic educational moral values and ethics and is an acronym **MAHATMA** reminding respectful Mahatma Gandhi. (**M**-Manage with Information and Metrics **A**- Agility and Adaptability, **H**-Honesty, Integrity and Ethical Practice, **A**-Attitude Before Knowledge, **T**-Teamwork, **M**- Mentor, coach and make and, A-Ambience for learning.

GIIS Tokyo Objectives

The objectives are set by Leadership of Tokyo guided by Corporate Management to enable school progress and plan for the future. The current objectives are set based on the progress and growth which GIIS Tokyo has achieved so far and the potential it has looking at the future market scenario. Objective setting process is done based on the performance of the school, demands of the market, scope of growth and also keeping in mind competitor profile.

Objective-A

Fig 2.1 .a Overall Objectives

The reputation of an international school is usually determined by graduation cohort strength, graduating students' admission rate to universities, international outlook, academic performance, learning environment based on customer surveys etc. We aim to be the best school for quality and affordable education for students in Japan through encouraging their creative and entrepreneurship skills.

Objective B

GIIS Tokyo intends to provide educational excellence to students with all rounded developmental including scholastic and co-scholastic developmental activities and provide platforms for students to excel in their areas of interest.

Objective C

GIIS Tokyo can sustain and grow only when our community including students, parents and staff are having meaningful connections. Building and fostering a positive engagement of school community through impactful student, parental and staff connections will result in on growth of the school.

The main objectives have been drilled down to form a matrix of parameters, indicators and unit of measures. This helps schools as well as all departments to connect and to a have a clear direction of performance indices.

Table 2.1.b Overall Objectives of GIIS Tokyo

Objectives	Parameters	Indicators (Measurables)	Unit of measure- KPIs
1.To become largest international school in Tokyo by 2030	**1.1. To offer multi curricular academics Offering to be diversified student demographics**	**1.1.a**. Student strength	1.1.a(1) Total students on roll
		1.1.b. Diversity within our ecosystems	1.1 b (1) Curricula offered 1.1.b(2) Student nationality diversity 1.1.b(3) Number of languages offered.
	1.2. Excellence in overall administration.	**1.2.a**. Parents NPS	1.2.a(1) Parent Satisfaction Net Promoter Score(NPS)
		1.2.b. Quality Assurance in Education Excellence	1.2.b(1) Number of awards won from independent bodies
2.To provide Education Excellence through Quality Management	**2.1. To provide conducive scholastic learning environment and provide modern teaching and learning technologies and facility**	**2.1.a**. Academics results	2.1.a(1) ASAS
		2.1.b. External Board results	2.1.b(1) External Board Results
		2.1.c. Student Teacher Ratio	2.1.c(1) Student Teacher Ratio
	2. 2. To provide all rounded developmental co-curricular activities and provide platforms for students to excel in their areas of interest.	**2.2.a.** Student awards	2.2.a (1) Student Awards
		2.2.b Implementing kaizens and successful QCs	2.2.b(1) QCs successfully completed and Kaizens reported
		2.2.c Extra Curricular Activities and Cocurricular Activities offered	2.2.c(1) Number of Extra Curricular Activities (CCA) and Co-curricular Activities (CCA) -Options Offered to Students
		2.2.d Global Student Exchange Program	2.2.d(1) Number of platforms for Students in various exchange programs (internal and external)
	2.3 To encourage and be a part of global sustainability through responsible actions	**2.3.a** Sustainability education to students	2.3.a(1) Sustainability activities in school.
3.To provide a positive engagement on growth of the school community.	**3.1 To provide environment for positive student engagement**	**3.1.a** Student Satisfaction	3.1.a(1) Student Satisfaction Survey Score
		3.1 b Student NPS	3.1.b(1) Student Satisfaction NPS Score
		3.1.c Student Sentiment	3.1.c(1) Student Satisfaction Score
		3.1.d Alumni Connect programs and activities	3.1.d(1) Alumni Connect 3.1.d (**2)** Monitoring Alumni University Pathway 3.1.d(3) Learnings from Alumni (Feedbacks and recommendations)
	3.2 To provide environment for positive parental engagement	**3.2 a** . Parent Satisfaction	3.2.a(1) Parent Satisfaction Score
		3.2.b Parent Sentiment	3.2.b(1) Parent Sentiment Score
		3.2.c. Parent Complaint Management	3.2.c(1) Percentage of complaints received
		3.2.d Parent engagement activities	3.2.d(1) Number of parent Engagement Activities
	3.3 To provide environment for positive staff engagement	**3.3.a** Staff Satisfaction	3.3.a(1) Staff engagement Score
		3.3.b. Staff engagement activities	3.3.b(1) Number of staff engagement activities
		3.3.c Staff Attrition	3.3.c (1) Avoidable attrition
		3.3.d Training and Development	3.3.d (1) Training Hours annual
	3.4 To provide environment for positive neighborhood engagement	**3.4 a.** Activities for neighborhood	3.4.a(1) Number of activities for neighborhood
		3.4.b Survey and feedback from ward office	3.4.b(1) Survey and feedback report
		3.4.c Collaboration with local bodies	3.4.c(1) Number of collaborations with local bodies

2.2 Strategies and Measures Towards Objective Achievement

The strategic measures of GIIS Tokyo include our agile response to the changing educational needs. This identifies our distinctive position in the marketplace. Some of the strategies that school has made through the years are illustrated below. Measures to achieve objectives are formulated in all the strategies areas. Some of them will be part of long term plans and short-term Plans. Long-term plans take 3-5 years and short- term plans take 1 year. Long Term goals of school are derived from higher level objectives of the school. Some of them and their current level are listed below.

Fig 2.2.a GIIS Management Strategies

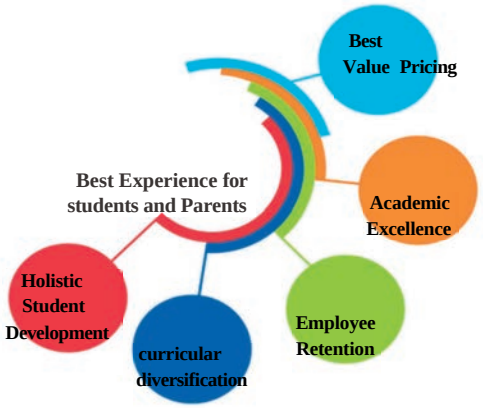


Table 2.2.b Strategies and Measures of strategies

Strategies	Measures	Indicators	Linked School Objectives
Best Value Pricing	• Parent Satisfaction Score • Student growth	Parents Willingness to pay	Largest International School
Academic Excellence	• Education Excellence • University Acceptance	Parents and Students delight	Education Excellence
Curriculum Diversification	• Parent Satisfaction Score • Students Satisfaction Score	Parents and students' satisfaction	Largest International School Education Excellence
Holistic development	• Student awards • Student participations in nonacademic platforms	Parents and students' satisfaction	Education Excellence
Employee Retention	• Employee engagement score • Employee retention rate	Employee Satisfaction	Positive engagement on student community

Table 2.2.c Long Term Plans

Long term Plan	Target Level	Current Level	Linked to
Parent NPS	>60 %	54%	Objective A
Student NPS	>60%	60%	Objective C
Staff Satisfaction	>80%	73%	Objective C
Alumni Connect programs	>10 per year	2 per year	Objective C

Table 2.2.d Short-Term Plans

Short-Term Plan	Target Level	Current Level	Linked to
Academic targets ASAS	>85 %	81%	Objective B
Academic targets Board Result – CBSE	91	79.5%	Objective B
Academic targets Board Result – IB	85%	75%	Objective B
Student withdrawals from school	< 20% Of total student count	23%	Objective A

2.3 Stakeholders Interest

GIIS Tokyo school also considers the needs and expectations of its internal and external stakeholders and works on strategies to fulfil these through focused action plans. The stakeholders involved in school education are classified into groups by their importance in the education process. Required factors on how to carry out TQM activities related to the criteria are determined from the literature on general practice and practice in an educational context.

Stakeholders are classified into six categories and numbered according to importance:

(1) Students (2) Parents (3)Parties who are frequently involved with school (External Providers like vendors of Security, Transport, Housekeeping) (4)Regulatory bodies (Accredited Educational Bodies)(5)Staff (6) Society

As education is primarily about communication between teacher and student as well as facilitation of learning between them, these are the 2 parties with the most frequent interactions in the provision-of learning process. Table 2.3 a is derived specific to GIIS.

Table 2.3 a The Needs and Expectations of the Stakeholders

GIIS Stakeholder	Reason for Interest	Needs & Expectation of Interested Parties
Students	Direct recipient of services	Attention should be given to all students equally
		Good learning environment
		Adequate facilities
Parents	Direct recipient of services	Specific parents has special request to give attention to their children
		Qualified teachers
		Excellent curriculum
		Hearty welcome & pleasant assistance
		Safety and cleanliness
Parties who are frequently involved with school -External Providers(Security, Housekeeping, Transport)	Provide supporting services to school	Supplier-vendor relationship leading to good perceived quality experience to students
Regulatory bodies Japanese(Govt Law Enforcements and CertificationBodies)	Dictate controlling regulationsthat impact school services	Pay all applicable Taxes / follow local laws and regulation with regular updates
	Assess the conformity of schoolagainst ISO standards	Effective Implementation of ISO standards with all relevant clauses in the organization
Staff	Responsible for awareness of the school's services	Continuation of job/wages with all applicable benefitsto pay the cost of living/Professional Development/Growth via regular trainings
Society	School's services could impact oncommunity harmony and growth as school grooms students who are tomorrow's adults.	Contribute positively to local environment and community/No complain relation to noise, pollution, waste and employment

3.TQM Needs

3.1 Challenges faced before TQM Implementation

As GIIS Tokyo grew horizontally and vertically, expending its curriculums offered and campuses, it was challenging to align the systems and operations. Similarly, competitors in the market were also emerging. This situation was taking us away from achieving our objectives of the school and the opportunities for improvement became more evident and needed.

Some of the facts included:

- **Inconsistent Educational quality**: Schools education deliverables were varied in each campus and segments leading to disappointing services, this may signal a need for a more systematic approach to quality control.
- **Parental dissatisfaction**: Reduced parental satisfaction which was caused by gaps in integrated quality management practices.
- **Declining Parental and Student loyalty**: increasing student withdrawal was a highlight that quality and service are no longer meeting parental expectations.

- **Less Staff morale: Teachers and staff felt disconnected from quality goals or lack the tools and processes to do their job effectively may disengage.**
- **Lesser profitability**: As a result of parental dissatisfaction and student withdrawals and increased operating expenses dues to wastages negatively impacted profitability.

Table 3.1 a -Challenges Faced by GIIS Tokyo Management

Objective	**Area**	**Strategic Challenges Specific to GIIS**	**Root Cause (Probable)**
Objective A To become largest international school in Tokyo by 2030	Student strength	Students' withdrawals	Floating expat population
	Graduating cohort strength	Less number of students in higher grades as we were offering only in one curriculum	Previously only Indian Curriculum offered
Objective B To provide Education Excellence through Quality Management	Academics	Inconsistent academic performance in higher grades	Students come from different curricula in high school and take time to adjust to the specific curriculum
	Student development in Non -academic areas	Limited skills development opportunities	Less focus on all rounded development
Objective C To provide a positive engagement on growth of the school community	Parent Complaint management	Resolution time of complaints was too long.	Manual complaint resolution mechanism resulted in loss of communication and delays.
	Staff development	Not much updated with modern teaching tools and resources	Minimal training and developmental opportunities to staff

3.2 Findings that led to TQM

In order to overcome the challenges explained above, the solution was to adopt of TQM which was intended to create competitive gravity for GIIS Tokyo in order to meet parental and student's expectations.

The opportunities and weaknesses from the findings included that:

- In school earlier, focus was only on achieving short-term goals and financial results, which was weakening the long-term commitments.
- The processes lacked standardization, resulting in wastage and inefficiencies.
- As the performance indicators and mechanisms for assessing progress were immature, it was difficult to gauge success or make necessary adjustments.
- There were communication challenges that resulted in misunderstandings about the goals, processes, and roles associated with school objectives leading to confusion and lack of alignment.
- GIIS realized that there should be alignment of school objectives and departmental objectives. Management policies should be deployed to the lower levels so that whole school adopts TQM Culture.

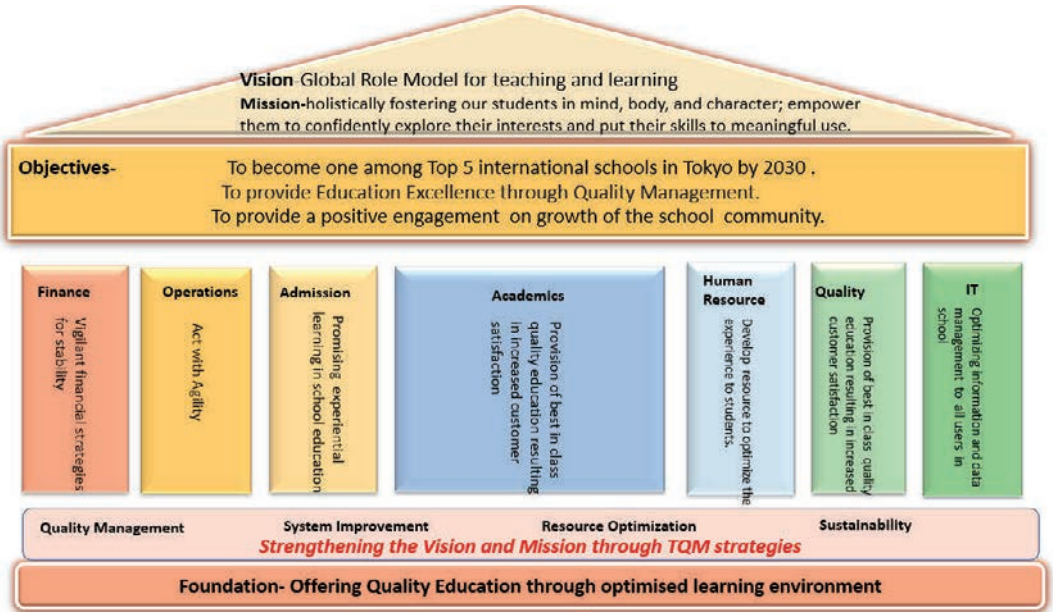
Also the need for monitoring, reviewing and analyzing the data was the need to deliver services to our students and parents. GIIS realized by implementing TQM, it would be good tool for bringing school alignment and capturing the quality of its work in the form of facts and data, thereby actively uncovering any problems and tasks, and steadily translating its findings into action through discussion among stakeholders.

3.3 Introduction of TQM as a Tool at GIIS

In order to streamline school education management better and to improve services to our students and parents and interested stakeholders' top management strongly felt that adoption of TQM practices will keep GIIS ahead of competitors and agile in the ever-changing marketplace. As our school expanded from one campus to two, three and four, the scale of services also expanded. As a result the teaching team and operating team were spread across. Our day-to-day operations needed a more streamlined approach to deliver our services.

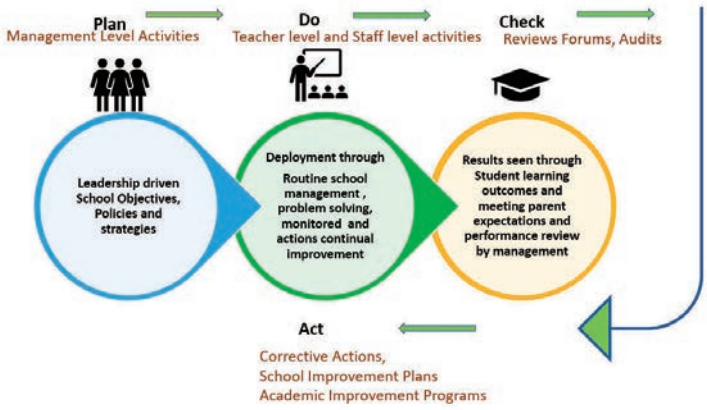
The purposes of implementing TQM were to have enhancements in quality management, system improvement, resource optimization and sustainability in overall school management including all contributing departments. The figure 3.3.a below shows a house diagram of overall GIIS approaches to attain objectives and its vision. We aim to apply TQM strategies in the foundation so that the impacts are there in all the departments of GIIS Tokyo.

Fig 3.3.a Overall GIIS Approaches to attain objectives and vision



3.4 GIIS Framework for Education

Fig 3.4.a GIIS Education Framework



GIIS Education Framework for TQM is shown in Figure 3.4.a which is set in the PDCA model. Planning is done on the higher level by management, executed by departments including academic and nonacademic and effects seen as student outcomes and overall school performances. School top management, including country director, principal, are involved in formulating school objectives and strategies, enhancement of school capabilities, aligning with TQM framework implementation. after the annual review of VMCs and Objectives during the Global Annual Leadership Summit (GALS), the senior leaders percolate the goals to the entire stakeholders through different methods and approaches. This is part of the planning process to top level.

The doing part comprises of Policies, strategies and objectives which is then translated into Routine School Management which is the systematic deployment to achieve school excellence based on challenging targets then executed through Middle management who include the department heads and academic coordinators, and also the teachers at the ground level in all the classrooms of GIIS Tokyo. This also includes proper education and training for teachers and school staff in the provision of education to students.

The effects of the deployment are seen through student performance results and school overall performance results. The monitoring and checking are done through various review forums at various levels. Some of the reviews are done by middle management and some by top management. While academic performance is monitored through student assessments and reviewed by academic department heads and coordinators, the financial performance and operational performance is monitored through audits and reviewed by department heads. During various Board meetings monthly, top management level also reviews the performance of the school.

3.5 TQM Journey

The progression of TQM was a step-by-step approach taking several years and integrating and aligning various departments. The journey started with decisions to build a global center for education excellence, GCEE where all planning related to TQM originated. This helped the school for planning and moving forward with a structured approach. Adopting of ISO systems through GIIS quality management system was the foundation. Further to that GIIS Tokyo decided to adopt business excellence models of Malcolm Baldridge.
The road map figure 3.5.a shows the progress of TQM for the school for each time period of initial, developmental and integration phase.

Fig3.5 a TQM Road Map

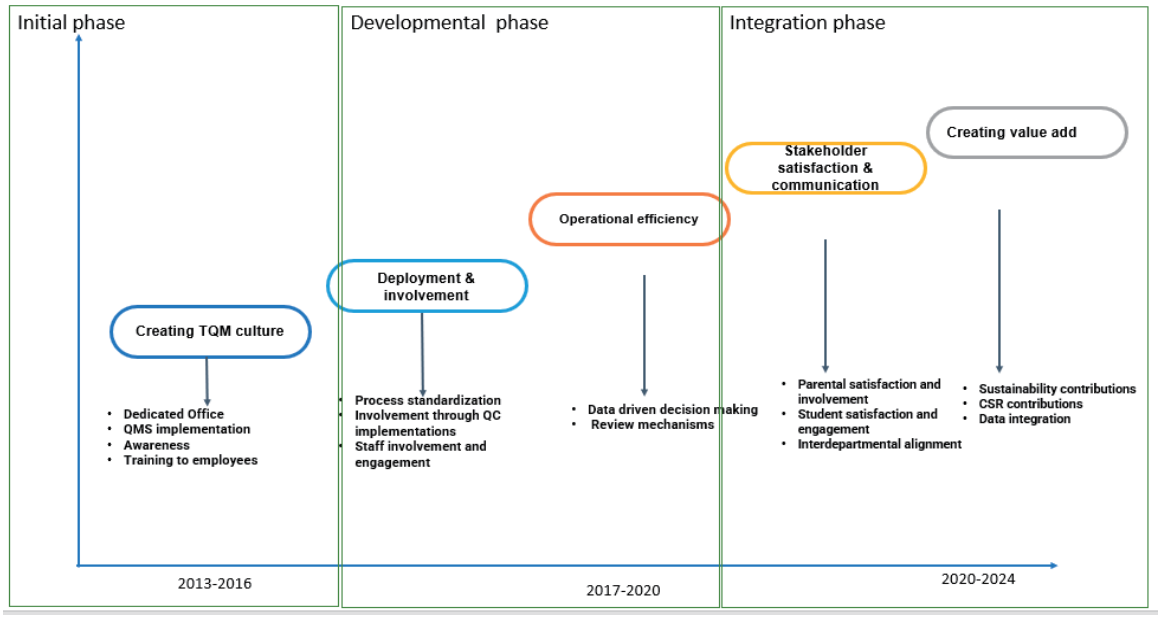


Table 3.5.b TQM Journey GIIS Tokyo

	Objectives	**Strategy**	**Effects**
Initial phase (2013-2016)	Establish dedicated department for TQM	Dedicated Department for quality in education.	GCEE department formation
	Implement ISO	Implementing Quality Management Systems and key processes.	ISO certification
	Crating a TQM culture	Training and awareness to employees	Performance 100 % staff trained for QMS and its need in routine management of school.
Developmental Phase (2017-2020)	Standardize processes across all campuses.	Training on Applying PDCA in all functions in all campuses.	121 staff trained during the period.
			Cycle time reduction in academic processes across campuses in functions.
			Error reduction in departmental activities.
	Introduction and Use of TQM Tools through QC Circles	QC training to teachers and total employee involvement. Training students for QC implementation.	Student QCs and teachers QC projects.

	Implement data-based decision support mechanism	Create MIS dashboards to capture overall school performance- "**PROMISE** " **7 S predictive analysis** for students performance in myGIIS	Data driven decision making through Review of promise dashboards in monthly management meetings, ABM, CBM etc
	Increasing organizational capability through adopting Excellence models for business improvements.	Third party assessments with bodies based on business excellence performance	Evaluation on school based on business excellence models and Feedback from third party assessors on school improvement. ACT now and action plans.
Integration phase (2021-2024)	Improving value add initiatives for students and parents.	Automated Listening mechanisms from students and parents	Help Desk Parents Feedback Students Feedback.
	Improving societal commitments as a school towards society.	Awareness and training to staff and students towards sustainability and reducing carbon footprint.	Implement sustainability projects driven by students

Employee involvement was an integral part of implementing TQM and it was possible through changing organizational culture and welcoming TQM culture.

4. Management Mechanisms

4.1 Governance mechanisms and Review systems

GIIS governance is guided by the directions given by the GSF Governing body and SWOT analysis and the performance results of school achieved during the preceding years. This is mainly categorized into (1) GIIS Policy and Objectives formulation, (2) Routine school management, (3) Inter-Departmental Alignment and Integration

4.1(1) GIIS Policies and Objectives formulation

Our policies and objectives are also formulated based on inputs considered in areas including external and internal stakeholder needs and the business environment in which our schools operate.

Inputs from stakeholders-For keeping our organization proactively relevant, sustainable and socially relevant we update ourselves and customize ourselves to accommodate input and feedback from stakeholders by providing them with what they want.

Student Centric activities-All our activities are designed for student-centric approach which has strong school connectedness for our students.

Safety – Safety of kids all times as responsible custodians. Regarding safety immediate response to concerns, counselling for children, in-house nurse and an infirmary to attend student/staff at all conditions are present.

Social responsibility -School Management of GIIS, Tokyo has a social responsibility of imparting education to a diverse student population.

4.1(1) a. Policy and Objectives formulation- TQM Implementation Stages

Table 4.1 (1)a.1 Policy and Objectives formulation TQM Implementation Phases

	Objectives	**Strategy**	**Effects**
Initial phase (2013-2016)	Policies related to complying with academic regulatory legal compliance.	Document Management System	100 % compliance
		Reviewing compliances and adherence.	
Developmental Phase (2017-2020)	Policies related to knowledge and skill development for teachers	In-house teachers training platforms and opportunities though external expert sessions and planned sessions	Number of external Skill development opportunities for all teachers.

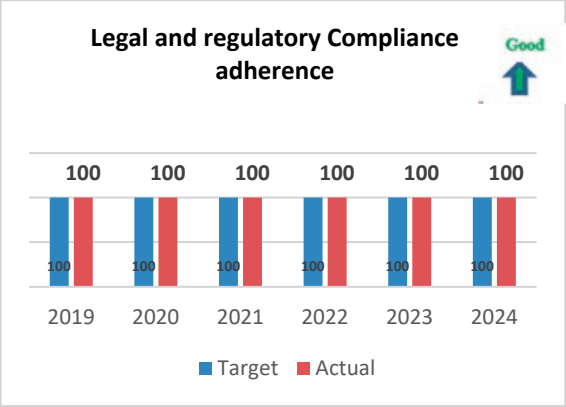
	Financial aid to students in need.	Scholarship program.	Scholarship based on merit
Integration phase (2021-2024)	Policies to improve and enhance students' requirements in Academics annually.	Additional educational skills for students through innovative educational methods.	Robotics club introduction for students, DA, Toddle
	Policies related to improving parental related requirements in operations.	Improve listening mechanisms	Help Desk APP (Customer Support)

The policies, Objectives of the school are communicated to employees and students according to the relevance, adequacy at various platforms.

4.1(1)b Effects of TQM Implementation in policy and objectives formulation

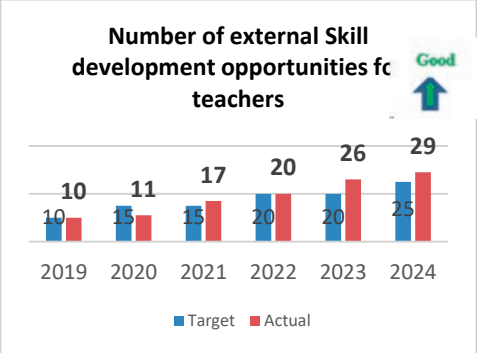
The effects of our policy management can be seen overall across all the different departments are put together resulting in achieving the Objectives A and B of school.

Effects during initial phase



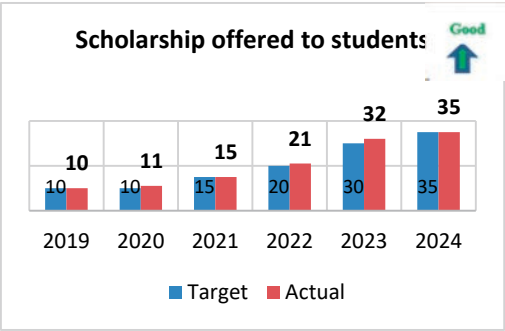
Legal and regulatory compliances are achieved, reviewed, improved and during the TQM phase

Effects during developmemtal phase



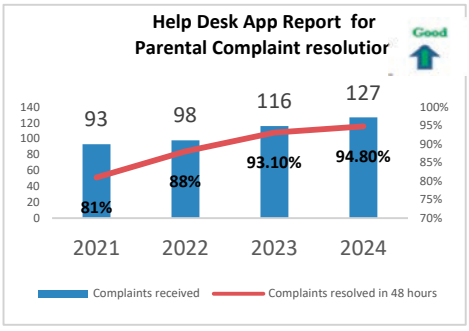
During the developmental phase included external training opportunities for teachers and staff which helped in increasing the service efficiency in terms of teaching.

Effects during developmemtal phase



Policy improvements by management to offer merit scholarships to eligible students helped to retain well performing students in high school. This helped in having longer customer life cycle.

Effects during integration phase



Management policy decisions to introduce Help Desk App to resolve parental concerns have helped in resolving complaints in less than 48 hours and we were able to achieve the target of average resolution time to more than 90%.

Highlights -policy management deployment at GIIS Tokyo
During the TQM period, GIIS Tokyo made improvement changes to it ***employee health care policy***.
This included making a health committee with a doctor and included annual health fitness checkup sponsored by the school to all its employees in all the campuses.

4.1(1)c Futuristic Activities in Policy Management

- Workforce Capacity utilization
- Improving customer concern resolution speed.
- Improve facility expansion.

4.1(2) Inter-Departmental Alignment and Integration

All our work processes are related to our work systems either academics system or support system and are inter-related to each other. All the functions which are not directly connected to academics but become part of the system are mapped through work system network. The network of interacting and connected activities helps to convert the requirement supply process easier.

KEY WORK SYSTEMS	
ACADEMIC SYSTEM	Teaching Learning Process, Exam Process, Co-curricular Activities, Community Outreach Activities, Value Addition Activities
SUPPORT SYSTEM	Admission Process, Finance Process, Stock Process, Transport Process
MANAGEMENT SYSTEM	Administration Process, Safety Process, Legal /Social Responsibility Process, Quality Assurance Process

Three major departmental work systems are prevalent for GIIS VIZ: **Academic System, Support System and Management System.** The Work Systems and Work Processes at GIIS Tokyo help the school operate to deliver its academic programs successfully and help in our organizational success and sustainability. Learning from best practices / innovation / cost reduction from sister concerns will help us to reduce cost further.
Additionally, we have QC by teachers and students who have initiated journey of TQM. Cross functional interactions thus result in Improved customer satisfaction. Improvement actions of one department are communicated to the other so that the benefits acquired in one area can be duplicated in other areas also.

4.1. (2)a TQM Progression in inter-department alignment and Integration

Table 4.1 (2)a.1 TQM Progression in inter-department alignment and Integration

	Objectives	**Strategy**	**Effects**
Initial phase (2013-2016)	Vertical alignment of work systems to improve service efficiency	Introducing Listening mechanisms through surveys	Improved customer satisfaction
Developmental Phase (2017-2020)	Reduction of work system related problems.	Third party assessments/ and process audits to ensure work system perfection.	Increased Number of audits
	Make interrelated work system services faster through reducing work delays between systems and departments.	Establishing Interdepartmental communication through process flows	Cycle time reduction in work processes
Integration phase (2021-2024)	Increasing customer engagement	Actions to improve feedback from survey of stakeholders	Reducing average time for resolving customer complaints.
	Inter curriculum and inter campus academic alignment	Inter departmental planning of both curriculum through learning centered processes integration	Number of best practices shared between curriculums

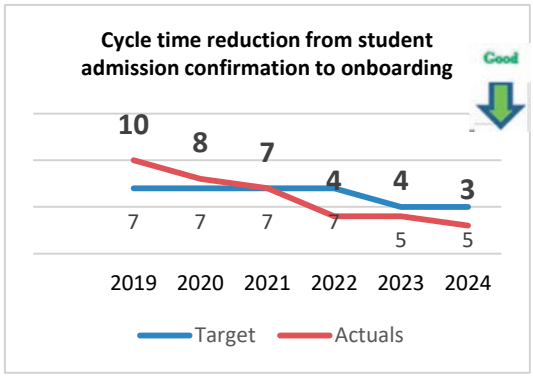
4.1.(2)b Effects of TQM in inter -department alignment and Integration

Effects during developmental phase

2019	2	*Internal QMS Audit *Finance Audit
2020	2	*Internal QMS Audit *Finance Audit
2021	2	*Internal QMS Audit *Finance Audit
2022	2	*Internal QMS Audit *Finance Audit
2023	4	*Internal QMS Audit **Finance Audit *Academic Audit *Compliance Audit
2024	5	*Internal QMS Audit *Finance Audit *Compliance Audit *Academic Audit *Safety Audit

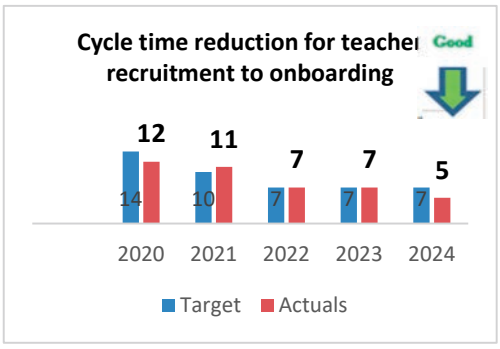
During the TQM phase the inter department alignments were strengthened as more audits were conducted. Each type of audits helped to reduce our gaps in work systems and improve the system.

Effects during developmental phase



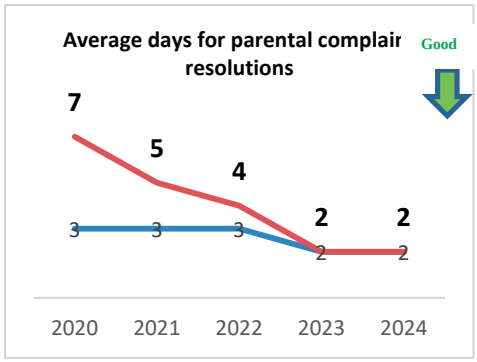
Due to improved interdepartmental work integration, cycle time reduction has been achieved which resulted in parental satisfaction improvement.

Effects during developmental phase



Teacher onboarding cycle time reduction has helped in reducing the gaps between teacher changes and has resulted in continued teaching process. This has helped in improving student satisfaction in academic learning

Effects during integration phase



During the integration phase due to automated Help Desk complaint resolution system we were able to resolve parental complaints in different departments like finance and transport and other nonacademic areas.

4.1.(2.)c Futuristic Activities in inter -department alignment and Integration

Future strategies for inter -department alignment are introducing 360 degree communication between parents and between the campuses in relation to operational matters.

4.2 Daily Management

4.2.(1) Routine school management

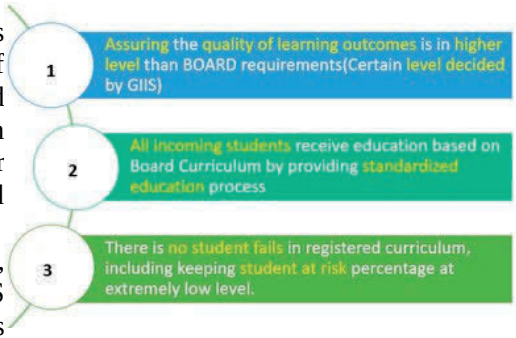
As an educational service provider, our school's daily work management -Routine School Management (RSM)revolves around teaching and learning in academics as well as co-scholastic areas and all activities to support the same around it. With daily management everyone in the organization can identify their roles in each area and the interlinkages with each department.

4.2.(1).a. TQM Implementation Stages in Routine school management

Table 4.2(1)a.1 Routine School Management TQM Phases

	Objectives	Strategy	Effects
Initial phase (2013-2016)	Stabilizing academic functionsas per guidelines of academic board and applying PDCA	Setting academic process forwhole school.	Compliance with Accredited educational bodies -CBSE, Cambridge
	Stabilizing HR resources adequate facilitating.	Training for teachers for academic processes.	Ideal Student Teacher ratio
	Stabilizing operational and administrational processes.	Introduction of separate departments for each adminfunction.	SOPS and Policies for administration and operational processes.
Developmental Phase (2017-2020)	Standardizing academic processes across all segments and campuses through and curriculums and set academic targets.	Horizontal deployment SDCA of academic process across.	100 percent students pass in external exams.
	Continuous Improvement in overall educational performance by developing holistic development.	9GEMS-based educational program.	Student achievements in interschool scholastic and co-scholastic competitions
	Streamlining systems and applying SDCA in all non-academic departments and functions.	System controls.System audits.	Reduction of errors and delays operational & administrational processes.
Integration phase (2021-2024)	Increasing academic performance through system based monitoring and early interventions.	Student Improvement Plan (SIP).	Increased Graduating cohort size
	Improving overall operational performance through MIS Reporting.	Adoption of best practices from industry practices.	Promise V2 Score and Index for management decision making.

- ***Routine school management in Academics- PDCA and SDCA***



In academics, planning starts with identification of teaching goals topics under the various subjects being taught, what is to be achieved in terms of learning outcomes, responsibilities of teaching process, and expected results. Standardization of teaching and learning process happens through implementation of standard processes for academic teaching across all our classes and across all our campuses with all teachers following standard processes in all our curricula.

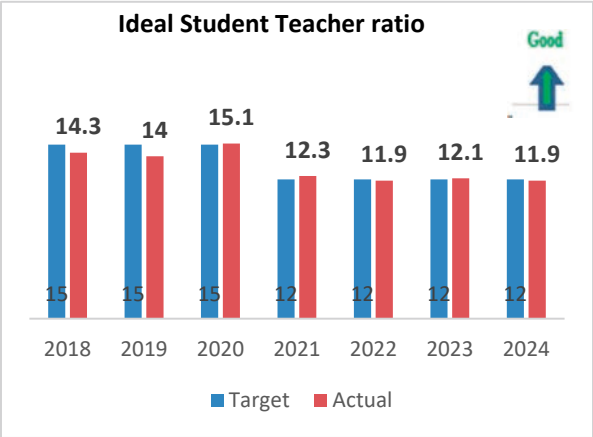
The review is against specific targets and includes the learning outcomes, documented for each subject, assessment records with targets set (7S analysis). The teacher is able to adjust her facilitation in the various subjects during daily management of the classrooms and learning that takes place on a daily basis. Through a multi-pronged approach, GIIS Tokyo is able to help each and every child in their learning journey and bring about the achievement of the Objectives set out for the organization as a whole. Continuous Improvement through holistic development in academics is executed in the form of small term projects.

- ***Routine School Management in Nonacademic Departments***

Total quality management is achieved when all functions are aligned, interdependent and talk to each other. All the sub functions in operations including HR, Admissions, Administration, Safety, Transport, Procurement, Finance; all of them are currently aligned to common school objective. Planning for the following year starts 6 months before the start of new academic year for each function with a set target for each year. As all the nonacademic functions are support functions all of them depend on academic needs of school. All the processes for each function are bases on standardized SOP which is across all geos. Checking happens through monthly review by Tokyo management as well corporate management through Campus Board Meetings, monthly reports, reviews and discussions. In case of abnormalities or sudden requirements, any changes required to ensure stability while making small improvements is acted upon.

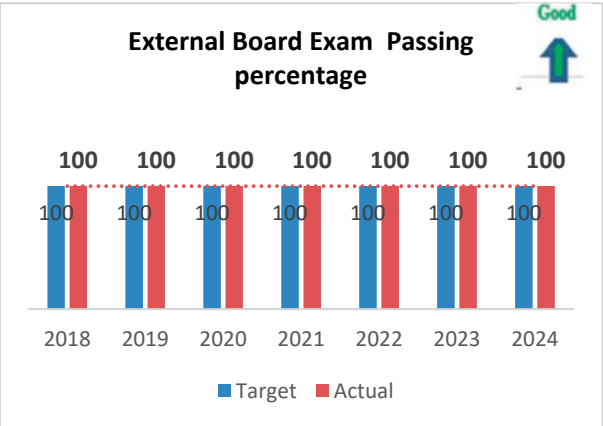
4.2.(1)b Effects of TQM Implementation in Routine school management

Effects during initial phase



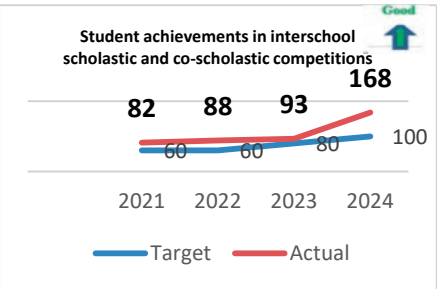
The target of student teacher ratio was at 12 but due to TQM practices we were able to maintain less than that which is good to have individual attention to students by teachers.

Effects during developmental phase



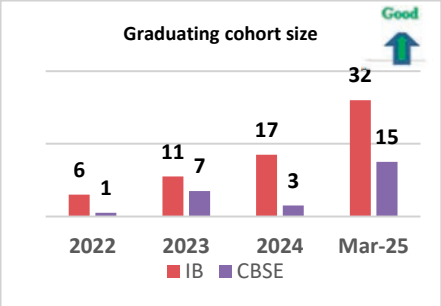
As a result of standardizing the academic processes, the external board results improved and we have been achieving a 100 % pass for all the subjects for all curriculums like CBSE, Cambridge and IB for board exams in grade 10 and grade 12.

Effects during developmental phase



Byintroducing 9 gems educational framework GIIS was able to bring in more improvements in scholastic and co-scholastic areas which is seen is student achievements in the form on external and interschool competitions in many areas other than academics.

Effects during integration phase



During the integration phase of TQM increased academic performance monitoring and action plans have helped retention of students in high school and our graduating cohort size improved.

4.2.(1).c Futuristic activities in routine managements

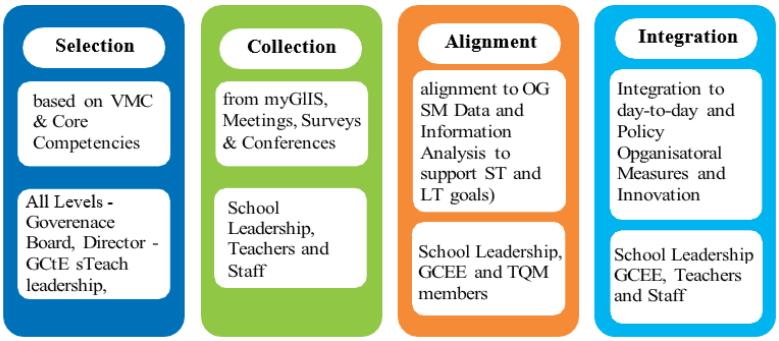
Futuristic activities in routine school management is related to automated systems and mechanisms of early detection of weak areas in academics. The Learning Management System is a system which is being developed which has elements of warnings at the early stages of an academic performance once it is inputted in the system. This may help the teachers not to wait till the end of a semester or a month to detect the red flags.

4.2.(2) Monitoring Practices

GIIS Tokyo believes in the adage “What you cannot measure, you cannot improve”. With that in mind, several tools are used to put in place measuring and monitoring mechanisms throughout the organization.
Manage with Information and Metrics is one of our core values and hence at GIIS Tokyo we follow various methods to collect data, review the areas if there are any problems and review it and act upon it.

Fig 4.2.(2)a Monitoring Practices

We have a top-down approach where corporate heads will review performance of our school and a bottom-up approach with ideas for improvements are reported by staff to principal. Cross monitoring happens in all departments and at all levels (horizontally and vertically). In the top level, corporate functions of departments like Academics, HR, Finance, GCEE (Quality) monitor the performance of each Geo through various forums as given below.



4.2. (2)a TQM Progression in Monitoring Practices

Table -4.2.(2)a.1 TQM Progression in inter-department alignment and Integration

	Objectives	Strategy	Effects
Initial phase (2013-2016)	Monitoring of student's academic performance	Student academic data management	100 % pass in External Board Exam
	Measure schools' operational stability	Monitoring mechanisms and process for operational level stability	Improving overall stability of school health
Developmental Phase (2017-2020)	Improve students' academic performance in all curriculum streams	Actions to improve on areas of improvement on student performance like remedial classes	Increasing student graduating cohort size.
Integration phase (2021-2024)	Improving Graduating Students admission to Top Universities	Early University guidance and support from school.	Improved Top University admissions for GIIS students with scholarships and grants.
	Strengthen review mechanisms for operational efficiency	Various Board meetings on biweekly, monthly basis.	Improved operational performance.
	Parent satisfaction monitoring	Parent Satisfaction survey and review of results and actions to address areas of improvement	Reduction in parental complaint percentage

Highlights of Monitoring and measuring system during TQM Promotion Period

- ***7 S analysis***

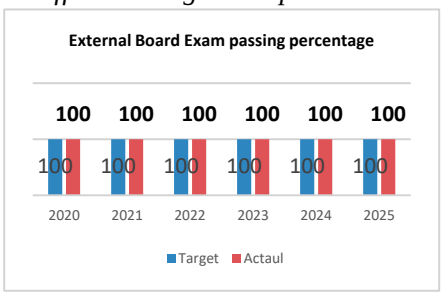
For academics we use 7S analysis method for monitoring student performance. 7S analysis, when done regularly, can give any school the ultimate tool to accurately measure its progress based on several parameters to predict future performance. The primary purpose was to measure the academic progress of our schools, based on certain parameters which help to predict a school's future performance and implement Action Plans in a pro-active manner.**1S**-School-wise (All students, All Subjects) ,**2S**-Segment-wise,**3S**-Subjectwise, 4S-Sectionwise ,**5S**-Studentwise **6S**-SubjectTeacherwise ,**7S**-SubjectTeacher-wise

- ***Balance Score Card –(PROMISE)***

The process of Management of Data and Information is intended to deal with this collected data and put to use to enact meaningful changes in education. Collection, Alignment, Integration and information for tracking daily management activities is done mainly through PeRformance Oriented Management Information System for Education (PROMISE) reports along with individual Departmental Management Information System. The key information on various performance measures selected is computed, analyzed and made available for the users.

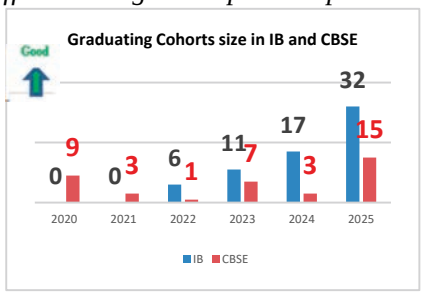
4.2. (2)b Effects of Monitoring and Practices

Effects during initial phase



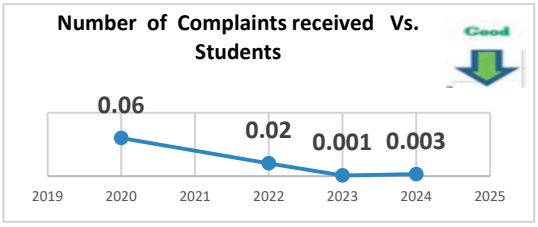
The initial phase of TQM in monitoring helped us to focus on external Board exam and Academic results giving a continuous 100 % pass in all CBSE and IB exams.

Effects during developmental phase



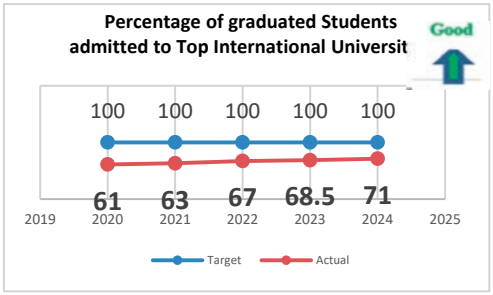
During TQM phase to improve in academics on areas of improvement on student performance like remedial classes, we were able to retain high school graduating students in CBSE and IB curriculums.

Effects during integration phase



Actions were taken during the Integration phase of monitoring Parent Satisfaction survey and review of results and actions to address areas of improvement. This has resulted in reduction in the percentage of complaints from parents Vs Total number of students.

Effects during integration phase



With our focused counsellor efforts and connections with top universities and academic focus, we were able to increase the percentage. We aim to improve this percentage in the future as well to keep it more than 75%

4.2. (2)c Futuristic Activities in Monitoring Practices

Futuristic activities in monitoring relate to improving Mechanisms and plans related to improving customer life cycle management

1. Monitoring practices to reduce student and parent dissatisfactions

4.3 Quality Circles and Kaizen Activities

By focusing on quality improvement in academics GIIS Tokyo aims to enhance academic teaching practices, curriculum effectiveness, and ultimately, student learning outcomes. For other departments and areas the objective is to improve overall process results aimed are to fostering Collaborations, Enhance Problem-Solving skills, develop Continuous Improvement culture among students and teachers, improve Professional Development and involvement values, and as a result achieve a proactive and positive school culture. The Kaizens were bucketed in areas of impact like productivity improvement, efficiency improvement, time saving, cost reduction etc. This was started by an awareness session and training on Kaizen. A formal Kaizen Club (KC) was formulated with teachers in the first place. Subsequently, Kaizens awareness was shared to all students and Kaizen representatives were made from students. The students helped in identifying Kaizens in students levels. Student led QC clubs helps the students to contribute and learn the problem-solving techniques even in the school level.

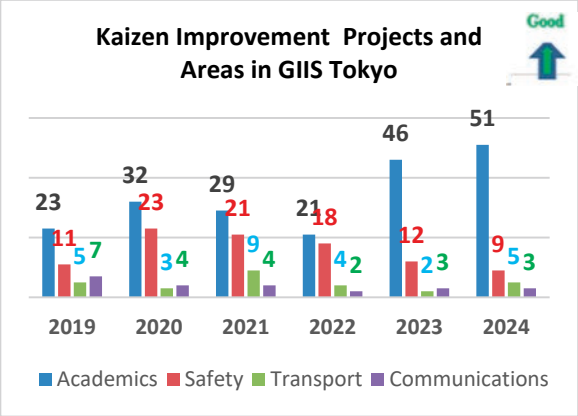
4.3.a TQM Activities in Effects of QC and Kaizen Activities

	Objectives	**Strategy**	**Effects**
Initial phase (2013-2016)	Introduce Kaizens and QCs to teachers -To bring in innovation, and problem-solving skills	Train Teachers and staff on how to implement Quality Circles.	Teacher Level Kaizens for improvement and efficiency.
	To have enhanced engagement within teachers and staff.	Develop and ideate new projects.	Total employee involvement
	Continuous self-improvement through identifying kaizens among staff.	Training and awareness for Kaizens	Improved Work Efficiency

Developmental Phase (2017-2020)	Introducing Student QCs-Improve Teacher – student collaborations.	Train students to implement QCs.	Successful QC and improvements.
	Introducing the importance of Kaizens for students	Hand hold Students to develop QC	Increase in QC participation and involvement in teachers and staff
Integration phase (2021-2024)	To introduce student empowerment.	Brainstorm ideas for QC topics and conduct workshops and events that attract students.	Impactful Quality Circles by students.
	Emphasize Collaborative learning in students.	Introducing Sustainability Theme	Participation in International QC Competitions by students

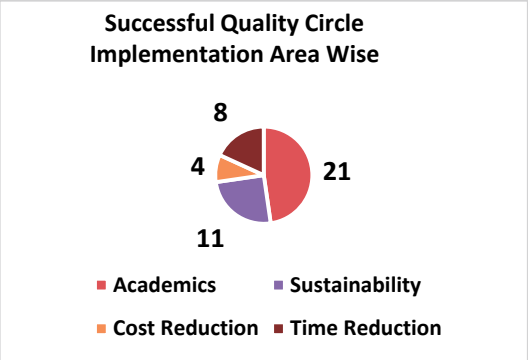
4.3.b Effects of QC and Kaizen Activities

Effects during integration phase



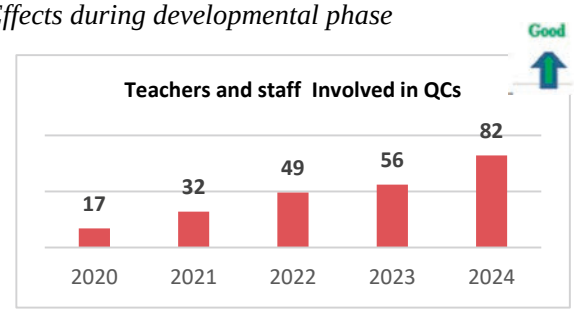
During the TQM period, Kaizens trainings were done for employees which helped the school in identifying kaizens and improvement projects. This helped in identifying small and steady kaizens in various departments of school.

Effects during developmental phase



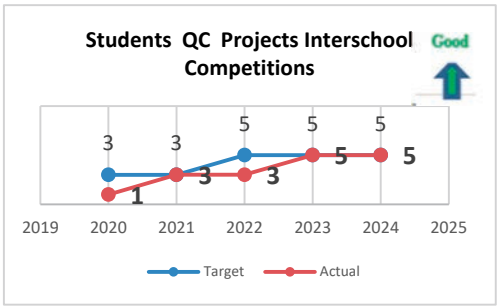
Quality Circles were promoted among teachers and Staff for problem identifications, and making own solutions and resulting in productivity improvement and team work. This has made successful Quality circles in various areas during the TQM period.

Effects during developmental phase



The increasing involvement in teachers and staff in QC have resulted in introducing the same concepts to students too. As campuses increased to 4, the QC practices were deployed in all the campuses.

Effects during integration phase



Students QC introduction and practice helped students to present the QCs in interschool competitions. This gave students and exposure to share their QC learnings and expericne through competitions with students outside GIIS.

4.3.c Futuristic Activities in QC and Kaizen Activities

1.Make projects and practices which can be measured related Waste elimination in terms of time wasted, resource wasted and cost wasted in all departments.

4.4 New Educational Service Development: Enrichment programs for student holistic development

After a few years of establishment, GIIS Tokyo has been creating innovative services to its parents and students, and to enhance learning and address diverse student needs and to enhance parental satisfaction This was achieved through adding new international curriculum apart from the original one and providing personalized attention services, technologies and methods aimed to stimulate creativity and critical thinking, encouraging students to innovate and solve real-world problems. In non- academics the focus was to provide services smoother to parents and to improve their experience through better and faster communication and concern addressing.

4.4.a TQM Activities towards Student experience Enrichment Programs

	Objectives	Strategy	Effects
Initial phase (2013-2016)	Support diverse learners and students across various nationalities in school.	Personalized student service through special language programs, one to one classes.	Improved student and parental satisfaction.
	After school care services beyond school hours.	After school students care for extended school hours.	Number of after school Programs increased.
Developmental Phase (2017-2020)	To build community service responsibility in students.	Develop programs that connect classroom learning to community service, allowing students to apply their knowledge in real-world contexts.	More than 20 community service programs conducted in all campuses.
	Support to non-English parents.	For non-English speaking parents, providing translated materials or interpreters during meetings.	Increased Bilingual Employees for Improved customer service for non-Japanese parents.
Integration phase (2021-2024)	Exchange partnerships to Make students to global level.	Create opportunities for students to connect with peers in different countries through virtual exchanges or partnerships.	More than 4 exchange programs every year conducted with international schools.
	Enrichment programs.	Offer clubs focused on arts, STEM, or languages to expand learning beyond the classroom.	7 new enrichment programs offered.
	Improve parental and student expectations beyond educational service.	Real time parental support through parental help desk center and Parental Relationship Manager.	Improved parental satisfaction and thereby student retention.

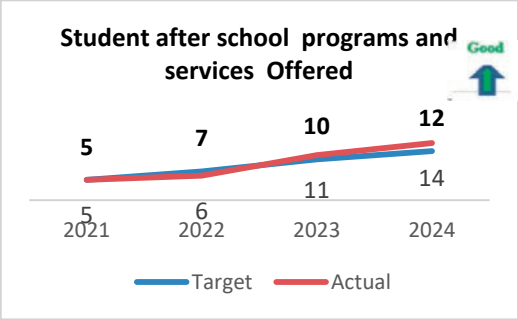
The notable and measurable activity during TQM is Inculcating modern Scholastic and Co Scholastic Curriculum to suit Global Students needs through:

Collaborative Partnerships: Engage with local organizations, businesses, and higher education institutions to enhance educational offerings, internships, and practical learning experiences for students. In these partnership students and teachers jointly contribute and collaborate with external organizations. This will give an exposure and experience of global perspectives for students. Also, school proactively collaborates with universities to make a seamless entry for our students to universities.

Student Leadership Programs: Establish student councils, leadership training, or advisory committees that allow students to have a voice in decision-making processes, encouraging them to take ownership of their education. Incorporate sustainability into school practices by reducing waste, recycling, using eco-friendly materials, and teaching students about environmental responsibility. Monitoring carbon foot print of GIIS Tokyo is one of the steps which Tokyo GIIS has started in the recent few years.

4.4.b. Effects of Student experience Enrichment Programs

Effects of implementation phase



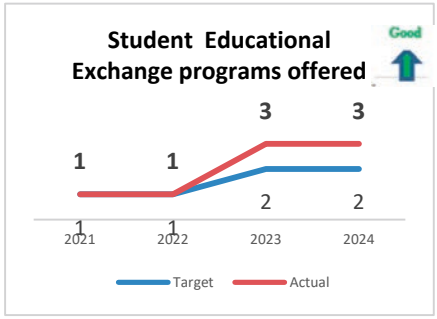
After School programs and services were part of improving Student and parent experiences during initial phase of TQM. This helped in having a beyond-school-hour relationship with parents and students.

Effects of developmental phase

	Bilingual Teaching Staff	Bilingual Admission Counsellors	Bilingual Admin Staff
2020	22	2	5
2021	27	2	5
2022	25	3	6
2023	29	3	8
2024	38	3	11

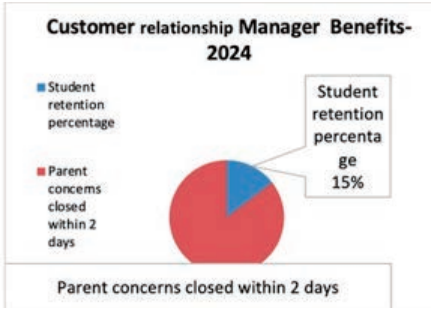
Increased engagement through hiring more bilingual Employees for Improved customer during the integration phase has resulted increasing the confidence among non-English parents also.

Effects of integration phase



Students educational exchage programs are special opportunities beyond regular schooling for students to experience, learn from other schools and organizations. GIIS Tokyo gives ample opportunities OECD exchange program in 2024 is a recent one in 2024.

Effects of integration phase



School has introduced a customer relationship who connects one to one with the parents on a routine basis once every month to all parents to know their concerns and feedback. This has increased parental confidence and resulted in retention of students.

4.4.c Futuristic Activities in Student experience Enrichment Programs

- Reducing learning gaps of non-English speaking students
- Leverage alumni connections and experience to benefit existing students

4.5 Quality Assurance through Education Excellence

From the start, Quality of education has been one of the key elements of GIIS process management envisaged by top leadership. The Global Centre for Education Excellence (GCEE) was set up in 2008 with the aim of improving the quality of all our work processes. Under the management of GCEE, all quality improvement initiatives are overseen. GIIS Corporate along with Tokyo leadership ensure adherence to Quality Policy and Objectives through the offering of quality education at reasonable cost. GIIS Tokyo school involves several steps to ensure educational standards and improve student outcomes. The scope of quality assurance covers all processes involved to ensure educational standards and support activities and to improve student outcomes and parents' experience. Quality policy and quality processes are defined by GIIS Tokyo, and all departments, functions and employees adhere to the same.

Tokyo GIIS has been certified for ISO 9001:2015 since 2018 and is certified for ISO 45001:2018 since 2020 followed by ISO 21001:2018 in 2022. While leadership is accountable for quality assurance overall, The Global Centre for Education Excellence (GCEE) department in Tokyo as per the directions of corporate GCEE monitors, analyses, improves and enhances quality through various improvement initiatives of both the learning and teaching of both students and teachers across all the campuses. The department has developed and deployed Quality Culture in GIIS Tokyo through its excellent quality model.

Through this model, GIIS manages its policies and procedures, conducts quality training, conduct evaluations, organizes data analysis, conducts reviews and supports management for informed decision making.

4.5. a TQM Activities towards Education Excellence

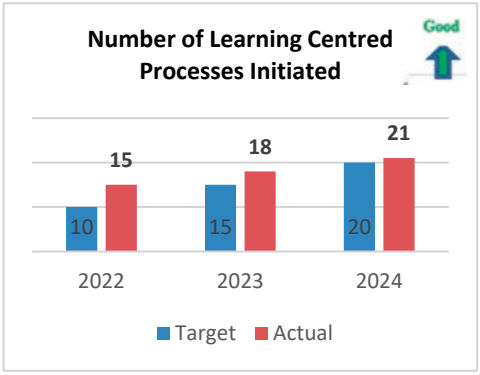
	Objectives	Strategy	Effects
Initial phase (2013-2016)	Establishing standardized processes in academics and all non -academic departments.	Adopting ISO standards for processes in education	Certified with ISO standards for school processes
	Error reduction in processes	Deployment of processes across campuses for all staff through training.	Learning Centered Processes improved
Developmental Phase (2017-2020)	Defining requirements for various student needs and engaging staff to set clear expectations.	Understanding Student and parent requirement through feedback systems and taking actions.	Meeting parent and student requirements.
	Continuous improvement to enhance quality of services and reduce errors.	Conduct audits and make corrections into specific areas of concerns.	Year on year audits, Audit findings and actions taken.
Integration phase (2021-2024)	Improve Student and parent experience.	Help Desk System established to handle parent queries in 48 hours and Customer Relationship Management in charge to have one-to one parent connect.	Reduction of parental and student complaints.
	Early detection mechanisms of student performance and actions	Review plans of performance of school on monthly basis for academic performance through leadership meetings and taking actions on gaps.	All Students All Subjects Average (ASAS)maintained over 80% on all students in all curriculums.

Some of the strategies followed by Quality department in GIIS are shared below:

Areas	Strategies		Indicators
Setting up Goals	Fixing educational standards and objectives for curriculum, teaching methods, and student outcomes.	**P**	Academic Targets and 7 S analysis
Establishing Standards	Through implementing Quality Management System in school.	**D**	GIIS Quality Policies and procedures
Creating Quality Assurance Framework	Quality Audits	**C**	Internal Audits and External Audits
Implement Continuous Improvement through Monitoring & Evaluation	1.Regular data review and analysis of performance 2.Through feedback analysis from students, parents and teachers	**A**	1.Balance Score Card-Promise 2.Parent, Student and Feedback Surveys

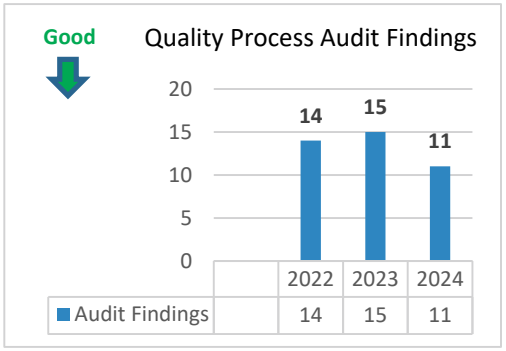
4.5.c Effects of Education Excellence

Effects during initial phase



Additional learning Centered processes were added during TQM phase. This has helped in focusing more on scholastic and non-scholastic and quality improvements benefiting students.

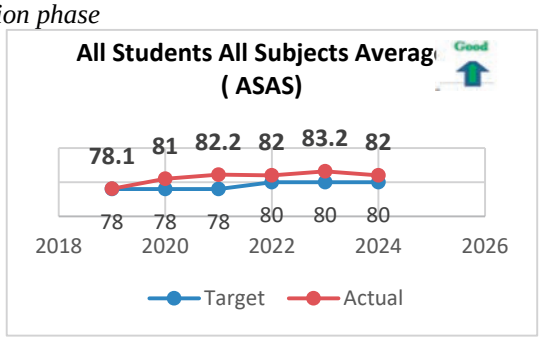
Effects during developmental phase



The audits process conducted, and corrections made for improvements into specific areas of concerns from the audit finding helped to stabilize and improve education excellence and quality. The findings were decreasing as we progress each year indicating the strength of processes.

Effects during integration phase

Because of the structured rreview plans of performance of school on monthly basis for academic performance through leadership meetings and taking actions on gaps the All Students All Subjects Average **(ASAS)** have been increasing. From the review studies it is seen that there has been lowering in the increment percentag of average which is sttributed to various curriculum academic standards.

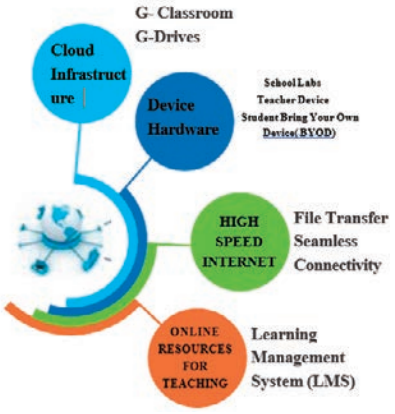


4.5.c Futuristic activities in Education Excellence

1. Implementing monitoring mechanism of up Data Lake to have quick data information for management decisions (explained more in GCEE departmental DTQM)
2.Our goal in the future is to improve the average to more than 82 factoring in the differences in various academic expectations.

4.6 Utilization of IT at GIIS

Fig 4.6.a Utilization of IT in GIIS



As a school equipped for 21st Century learning, utilization of IT is significant at GIIS Tokyo. For our knowledge management system, we use the advantages of IT. All key information is then analyzed and used to review performance and manage Organizational Knowledge to drive improvement in all areas of Operational Performance including student learning using IT. The process of Management of Data and Information is intended to deal with this collected data and put to use to enact meaningful changes in Education.

4.6. a TQM Activities in Utilization of IT

For student related matters, in-house developed ERP system called myGIIS was available right from initial stages, but the features kept improving and maturing, where student information is stored and accessible with authorized persons. This practice will help all relevant members to understand each child fully and address them according to each child. Also, there are many other methods listed below for the same purpose.

Table 4.6 b TQM Activities in Utilization of IT

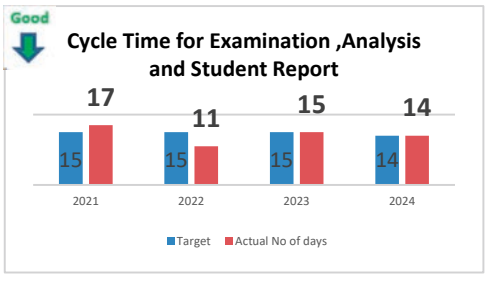
	Objectives	Strategy	Effects
Initial phase (2013-2016)	Increasing digital usage for educational purpose.	Using external digital educational resources for improved learning.	Centrally managed data resulting in Faster tracking, time saving and easy learning management
	Student data collection and information sharing using IT.	100% capture all students related data.(Personal information, Academic marks, feedbacks)	Time saved for student academic assessment and performance review and report cards
Developmental Phase (2017-2020)	Cross departmental data collection and information sharing using IT.	Enabling myGIIS ERP features across departments and across campuses and Improved internal information relays making shorter processing.	Increased numbers of departments Systems integrated with IT
	Use IT for knowledge management.	Software and Applications: Educational Software, Productivity Tools, Administrative Tools	Reduction of human errors using automated system and reducing time.
Integration phase (2021-2024)	Optimize Knowledge management.	Actively uses a number of IT systems for student performance analysis and Forecasting	Student 7 S analysis and prediction.
	Optimizing academic learning through IT resources	Procure tools and devices like Toddle, Hey Math	Increased digital resources for learning
	Application of IT for management decisions.	Using IT for Automated Employee Performance Management, Automated Financial performance Management, School Overall Performance – through Balance Score card -Promise.	100% operational data available at the repository and recovery center.
	Parental Support and communication using IT.	Parental myGIIS ID for 2 way information sharing and communication	100% Parental concerns addressed within 48 hours. Customer concerns closure improved from 72% to 91%

4.6.b Effects of Utilization of IT

- **Innovation and Technology Integration**

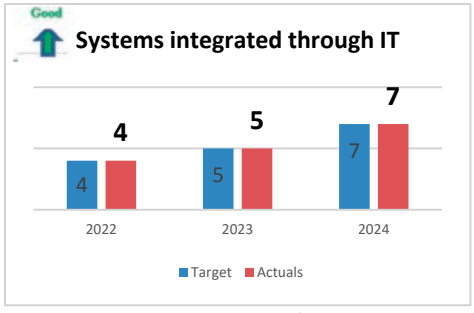
Data Analytics in Education: Utilize data analytics to identify trends in student performance, teacher effectiveness, and overall school performance, which can inform decisions about curriculum changes or professional development needs.

Effects of initial phase



With the integration of IT in academic performance management of students, it helped to reduce the cycle time of exams, result analysis and student reporting. Since GIIS Tokyo has many exams and assessments, utilization of IT immensely helps in managing them faster and efficiently.

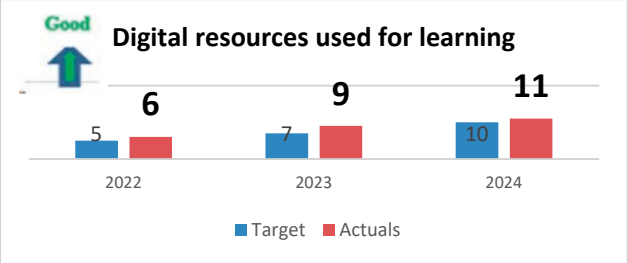
Effects of developmental phase



During The developmental phase of IT, various departments were integrated using effective ERPS. This has saved a lot of time in interconnected ness of various school departments. PMS, Percipio, Teamie, Accpac, QT9, my GIIS, HubSpot are some examples. This has saved a lot of processing time.

Effects of developmental phase

During the TQM integration phase, many more digital resources were introduced which helped updated resources for learning and managing students educational progress. This included, Toddle, DA, Hey Math.Some of them were initially introduced in one curriculum but then adopted by other curriculum as well.



4.6.c Futuristic activities in IT

More of futuristic planning on IT is separately mentioned in IT departmental DTQMP submitted along with, but AI in education through optimizing IT is the futuristic plan of the department.

4.7 Teachers and Staff Development

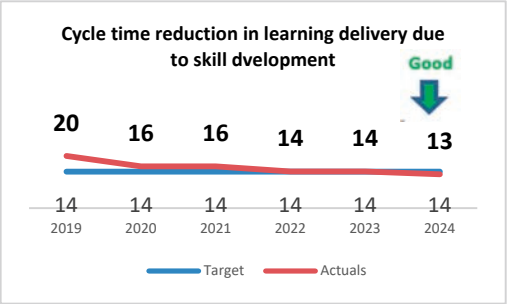
Employees in GIIS Tokyo are of 2 streams. Once the **academics team** who are directly in the process of facilitating students and **non-academic** team who are in administration. As our workforce majority fall under the category of academic team, are key role players in education, the deployment of TQM will not be possible without involvement of them. During the pre-TQM period GIIS made efforts to build fundamental systems like recruitment system. Employee engagement at GIIS Tokyo towards TQM was built through bottom to top approach. All employees were made part of awareness of TQM during job alike sessions at the beginning of the year. Training are given throughout the year and many staff are part of the annual improvement projects where in they contributed by idea generation to improvement projects big and small.

4.7. a TQM Activities for Staff Development (academic and nonacademic)

	Objectives	Strategy	Effects
Initial phase (2013-2016)	Develop skills and knowledge	Training Opportunities to develop teaching skills through internal Employee training.	Reduced cycle time in lesson preparation and delivery time.
Developmental Phase (2017-2020)	Assessment of skills and competency	Measure competence through performance matrix	Improved student learning outcomes
	Enhance parent – student relationship	Training in the soft skills of teachers	Reduced academic learning concerns by students from
	Employee retention	Provide Employee benefits	Reduced attrition rates to 10%
Integration phase (2021-2024)	Enhance Employee involvement	Involving employees in decision making process	Increase in employee engagement score than the target set.
	Create Employee learning platform.	Self-paced online training platforms	Self-growth in profession and access to new pedagogies
	Responsibility and accountability building in employees.	Leadership development programs	28 % of employees have achieved progress.

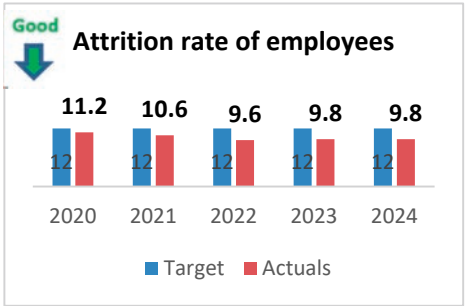
4.7. b Effects of Teachers and Staff Development

Effects of initial phase

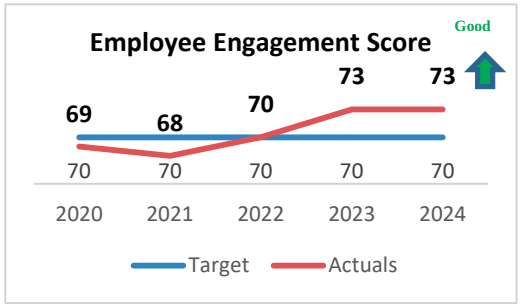
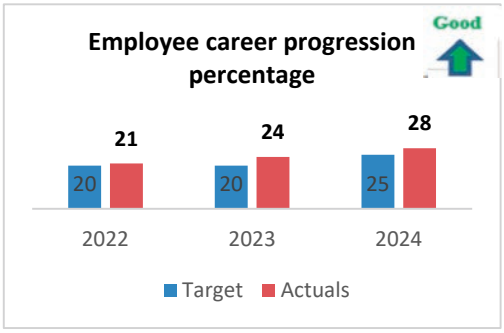


During TQM period, training sessions were focused on the specifics were made and as a result teachers were able to optimize the lesson delivery time.

Effects of developmental phase



The attrition rate reduction as per the targets set is the result of the improvement of TQM activities during the initial and developmental phase. They have found GIIS as a preferred place to work.

Effects of integration phase  Employee engagement scores are increasing as a result of team integration and all TQM activities happening during the period. Though we have achieved slightly more in the recent years than the target kept, our futuristic plan is to set the target higher and to aim more employee engagement score.	*Effects of integration phase*  Employee career progression increases percentage was resulted during the integration period. This has helped to increase the morale of the employees and positively impacted their performance as well.

4.7. c Futuristic Activities

1. Improve Employee upskilling
2. Improve Employee retention rate

4.8. School social responsibility (SSR)

As responsible corporate citizens, the GIIS-Tokyo leadership involves itself in social contribution activities. When engaging in community activities, the senior leadership selects themes of activities that suit the culture, social climate or issues of the local community and are aligned with the GIIS values, resources and expertise.

With this in mind, Sustainable Development Goals as identified by the United Nations are now incorporated into the student-driven projects aligned to Kaizen projects. The management ensures that costs are kept under strict control so that the school's sustainability is not affected.

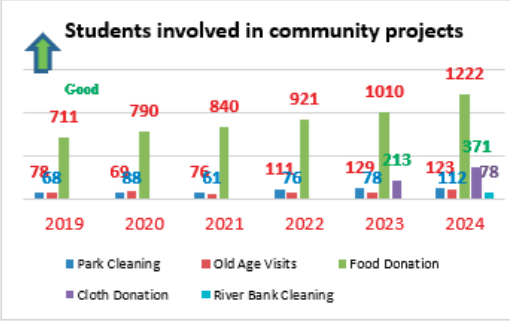
4.8. a TQM Activities in School Social Responsibility

	Objectives	**Strategy**	**Effects**
Initial phase (2013-2016)	Develop awareness and knowledge	Training for teachers for identifying programs Awareness and training to students social responsibility	Mahatma Gandhi UNIVAL programs organized for students
Developmental Phase (2017-2020)	Increasing student participation and involvement along with staff	Introducing projects that benefit society and environment	9 % plastic recycling achieved in school community 5 Social responsibility events conduced
Integration phase (2021-2024)	Involving parents in SCR	Introducing projects involving parents and students	4 volunteer work projects by students and parents

4.8. b Effects of School Social Responsibility

School was able to encourage and involve more and more students in diverse projects which were aiming towards social responsibility.
Each year we intend to increase the number of activities and projects and increase the student participation as well.

Effects of implementation phase



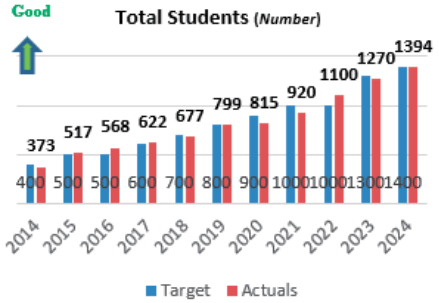
5. Overall Effects of TQM

The effects of TQM have resulted in the quality movement in school and thereby steadily moving towards achieving the overall objective of the school as mentioned in the earlier pages. The graphs below are mapped with the objectives and parameters and units of measure indicated earlier in the section.

Objective- A Effects

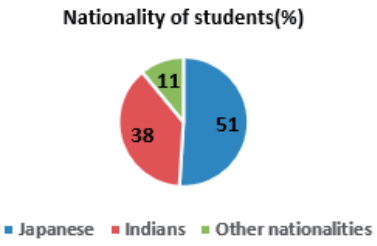
By balancing educational quality, market insight, strategic marketing, and operational excellence, GIIS Tokyo aims to position for significant growth and the possibility of becoming the largest international school in Tokyo. Steps like offering strong curriculums & Diverse Programs, which include a good balance of both international and Japanese culture has been attracting a wide range of expatriates while also respecting local educational aspects. Regularly seeking feedback from parents and considering their suggestions for improvement helps us to keep track of educational trends and provide personalized offerings.

KPI- 1.1.a(1) Effects- Total Students on roll



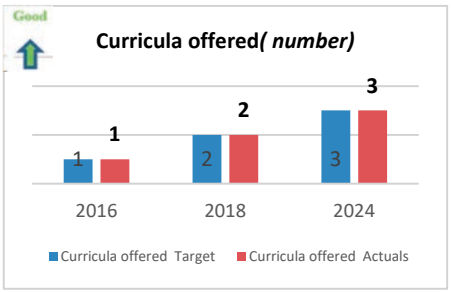
To become one of the largest international school student growths are an essential KPI. GIIS Tokyo has been steadily able to reach the KPI as planned.

KPI-1.1.b(2) Effects- Student Nationality Diversity



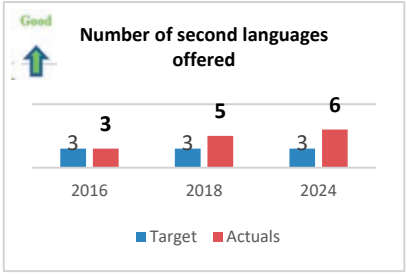
GIIS Tokyo has become a preferred choice for Japanese parents also resulting in Japanese students % more than 51%. This is also an important KPI towards becoming the largest international school in Tokyo.

KPI-1.1.b(1) Effects - Curricula offered



This has helped bring in students and parents who wanted a combination of different curriculum in different segments.

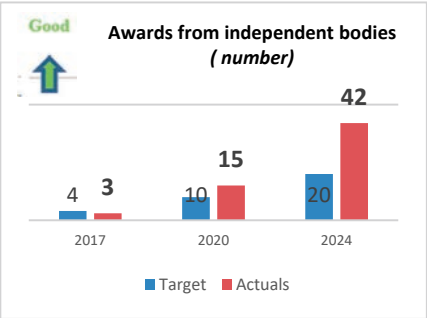
KPI-1.1.b(1) Effects- Number of second languages choices offered



In todays global world learning more languages are necessary to stay top in the market. Hence GIIS Tokyo during its TQM period increased offering of second languages.

KPI- 1.2.b(1) Effects-Number of awards won from independent bodies.

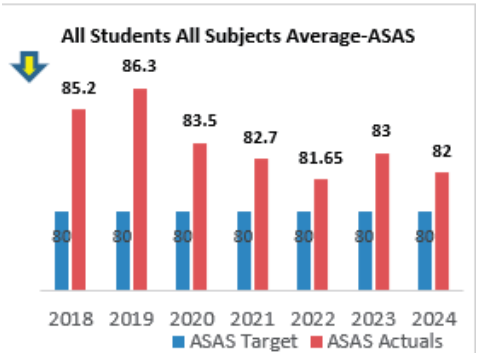
Third party bodies are outside the organization who inspect, examine and validate our systematic activities, practices and management style. Since each external body has different criteria to assess, each time when we apply for external evaluations, this makes our internal system stronger. This has helped GIIS Tokyo to improve in our overall administration.



Objective-B Effects

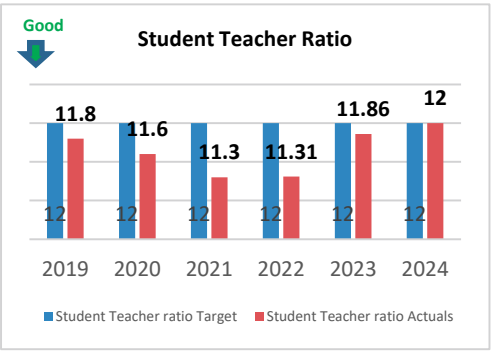
As a school aiming to provide educational excellence through quality management, we focus not just on academics but also on the emotional and social well-being of our students, extracurricular activities, and a healthy school culture and continuous improvement. Hire highly qualified teachers and make professional development who not only have expertise in international education but are also culturally aware and capable of addressing the unique needs of international children. The Extracurricular activities help to make skill development, personal growth and have social connections apart from academic growth. Through activities such as language clubs, international exchanges, or cultural performances, students gain a deeper understanding of different cultures and worldviews. This exposure fosters tolerance and empathy.

KPI- 2.1.a(1)- Effects-All Students All Subjects Average-ASASA(%)



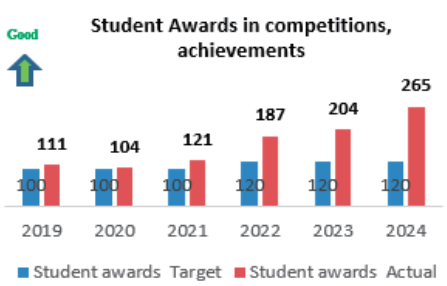
ASAS- includes all segments which have assessments across all curricula and all campus. GIIS Tokyo have been maintaining more than 80 % as targeted. However, the trend is declining in recent years. This is attributed to the newer curriculum implementation and assessment criteria requirements. As a part of our education excellence initiatives our futuristic aim is to improve the ASASA scores.

KPI- 2.1.c(1) Effects- Student Teacher Ratio



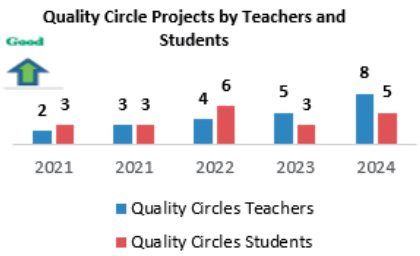
To provide high educational quality and a conducive educational learning environment, an ideal student teacher ratio is necessary. While the target is set at 12 meaning there is an average of 1 teacher for every 12 students, in actuals the ratio has been less than that. This helps individual attention for students.

KPI- 2.2.a(1) Effects- Student Awards



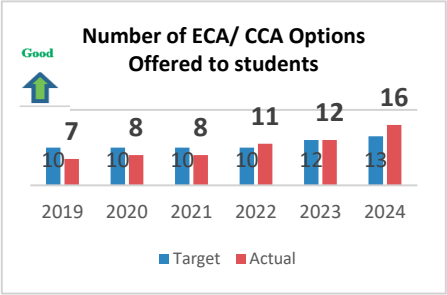
Student awards in competitions are external competitions other than academics which the students have won in various areas like sports, arts, performances, debates etc. Some of them are inside Japan and some are international.

KPI- 2.2.b(1) Effects QCs successfully completed



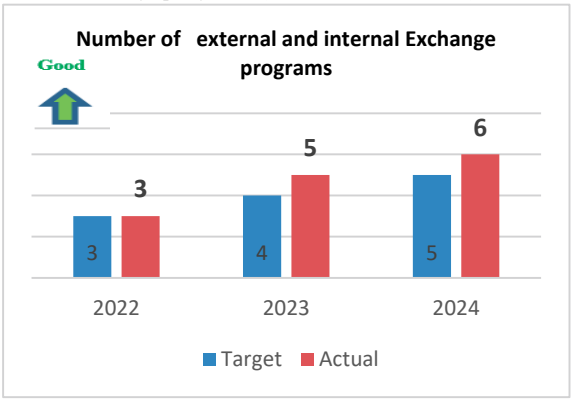
As a school adopting TQM, to improve quality and productivity constantly we have implemented QCs through Trainings to teachers and later to students. This has helped in bringing a problem solving and team work culture in the school.

KPI- 2.2.c(1) Effects – Number of Extra Curricular Activities(CCA) and Co -curricular Activities(CCA) -Options Offered to Students



To provide all rounded development of students and to provide equal opportunity for students to excel in their areas of interest as per 9 gems framework, the ECA and CCA activities options were increased during TQM period. This step is an action towards attaining the objective of providing education excellence beyond academics.

KPI- 2.2.d(1) Effects- Number of platforms for Students in various exchange programs (internal and external)



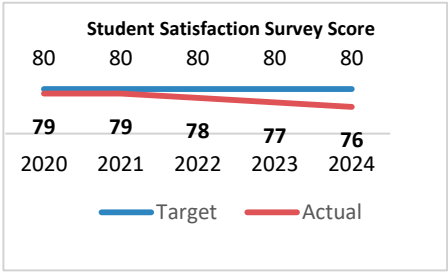
Internal and exchange programs are platforms for students who will get experience of educational and non- educational areas in different schools outside GIIS.

Objective C-Effects

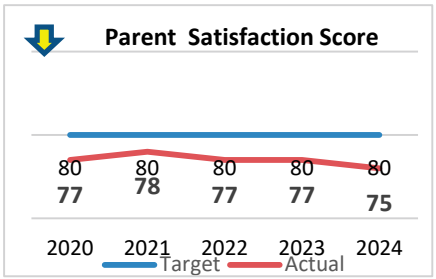
GIIS provides environment for positive engagement on growth of school community. Students get the chance to take on leadership roles in clubs, committees, and extracurricular activities. This helps them feel responsible for their school's success and growth These experiences foster a sense of community, inclusion, and belonging, making school a more positive and supportive environment and helps in improving happiness and satisfaction of students. Through hosting events such as open houses, celebrations, or cultural nights to bring together students, staff, and families GIIS brings together school spirit and unity. Also, we provide opportunities for teachers to collaborate and grow professionally.

KPI- 3.1.a(1) Effects - Student Satisfaction Survey Score(points)

Students Satisfaction score is the index which shows how satisfied the students at school. As it is based on the perception of each student, this will vary every time. We have kept targets are high at 80. It is currently less than the target.

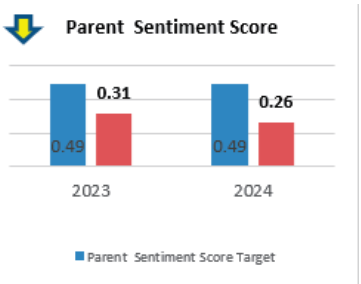


KPI- 3.2.a(1) Effects-Parent Satisfaction Score(Points)



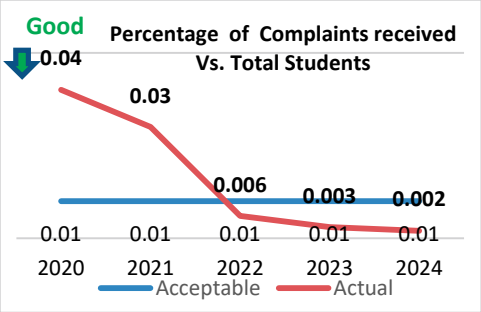
Parent Satisfaction Score is the index of how satisfied GIIS Parents are all across the segments and all campuses. We value the satisfaction rate of our parents as they are adults and they give their best judgment. At Tokyo we keep the satisfaction target at 80 however we have not reached there yet. Our futuristic efforts are to reach to the target level of parent satisfaction.

KPI- 3.3.a(1) Effects-Parent Sentiment Score (Points)



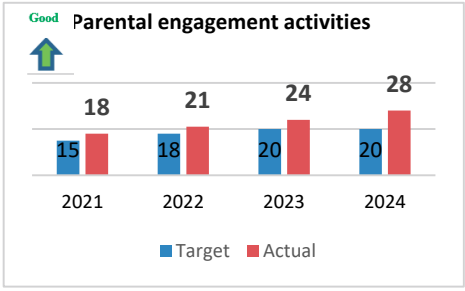
During the TQM promotion period GIIS started following Parents Sentiment Score is the net results of parent's sentiments or feelings from their responses towards various areas of school. The targets at GIIS Tokyo are 0.49 whereas currently we are at 0.26.A lot of factors comprise of positive parental sentiment and GIIS Tokyo will be working towards improving the current scores.

KPI- 3.2.c(1) Effects- Percentage of Complaints received



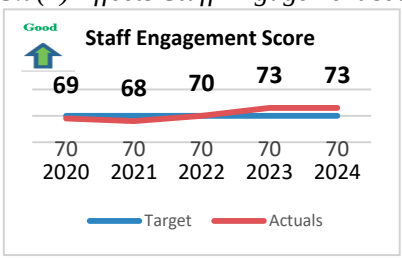
This included one to one parental connection and automated mechanisms through help desk. As a result the percentage of parental complaints reduces Vis a vis the total student count.

KPI- 3.2.d(1) Effects- Number of parent engagement activities



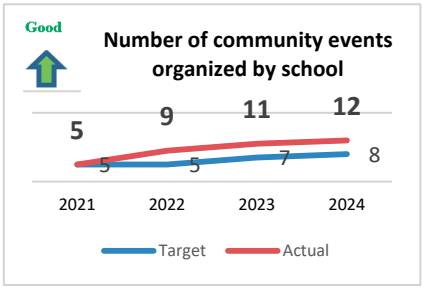
For the growth of school community positive engagements with parents are essential. Each activity is an opportunity to connect and build relationships with parents.

KPI- 3.3.a(1) Effects-Staff Engagement score



In GIIS, staff satisfaction is measured through staff engagement score. The survey questions measure how satisfied the employees with the school are. Our targets have been 70 and in the recent past we have been able to improve the staff satisfaction score.

KPI- 3.4.a(1) Effects -Number of activities for neighnorhood



In the past few years of TQM, GIIS Tokyo increased the number of activities for neighborhood. This was to provide environment for positive neighborhood engagement.

Futuristic TQM Activities for school.

Futuristic Total Quality Management (TQM) activities in GIIS Tokyo will be towards achieving the effects of TQM through improvement areas as per our targets . In some areas including parental net promoter scores and student net promoter scores which are based on parent satisfaction and student satisfaction we need to improve and achieve as per the target. Similarly academic scores need to be improved as we cater to diverse student demographics and diverse curriculum. GIIS Tokyo is aware that the targets kept are very ambitious and will take time to achieve them. As such our efforts in future as to achieve them in a faster pace. Our aims are to improve technological integration, personalized learning, and fostering a culture of collaboration among students, teachers, and administrators. Some of the key TQMM activities for the future are listed below.

- ***Incorporating Real-World Learning***: Integrate practical and experiential learning opportunities into the curriculum, such as internships, field trips, and service-learning projects, which bridge the gap between academic learning and real-world application. Moving away from traditional grading systems to competency-based assessments, where students progress after mastering specific skills or knowledge areas will help students to excel in the competent world.
- ***Incorporating AI in education-*** Continuously Improve the academic performance of students of all curricula in high school through AI tools like real-time data on student performance, behavior, and engagement. Teachers and administrators can use this data to make informed decisions about instructional methods, curriculum improvements, and resource allocation.
- ***Best Practice sharing*** -Introduce mechanisms to deploy TQM to sister schools of GIIS in other countries. This way other schools will embrace programs to ensure that students are equipped not only with technical skills but also with communication, teamwork, and critical thinking abilities.
- ***Improving Parental Satisfaction***-Our futuristic efforts are to reach to the target level of parent satisfaction through prioritizing and creating a respectful, welcoming environment for parents.

Parents are more likely to be satisfied when they feel that their children are being treated with kindness and fairness.

- ***Improve student Satisfaction***-Our future efforts in TQM are to analyze and review the reasons for the areas of low scores and improvement to make our students more satisfaction.

Benefits of adopting TQM

- Alignment of all functions and departments at GIIS has helped to attain overall objectives of schoolthrough inter departmental orientation
- School has been able to improve Satisfaction of customers and been able to provide service as per therequirements and expectations
- Made GIIS as an organization, agile and resilient to changes and challenges

The mind behind our TQM education process, our technologically advanced infrastructure forms the backbone of our global network and our extremely qualified & experienced faculty is the heart that runs it.

++++++++++++++ **********++++++++++++++++

２０２５年度

デミング賞
受賞報告講演要旨

Tata Autocomp Hendrickson Suspensions Private Limited

Chapter 1: Outline of the Organization

1.1. Background: Commercial Vehicle Industry in India

Indian commercial vehicle (CV) industry holds a significant position in the global market, reflecting its robust manufacturing capabilities and extensive domestic demand. As of 2024, India ranked seventh in global commercial vehicle production driven by domestic and exports demand. The commercial vehicle (CV) industry in India plays a critical role in the country's economy, contributing to logistics, transportation, and infrastructure development. The evolution of the CV Industry is shown in exhibit 1.1.1. CV is one of the key drivers for sectors like construction, mining, agriculture, and retail. THSL offers products in Medium and Heavy Commercial Vehicle and EV Bus segment. The Indian CV industry is expected to grow at a CAGR of 8-10% through FY29- FY30 (Source – KPMG). During this period, the shift towards electric buses and cleaner fuel vehicles will accelerate. Increased rural connectivity and government spending on logistics infrastructure will also drive demand for medium and heavy commercial vehicles. The Suspension solutions provided by THSL is shown in exhibit 1.1.2.

Exhibit 1.1.2 Product Application Truck and Tipper Suspension

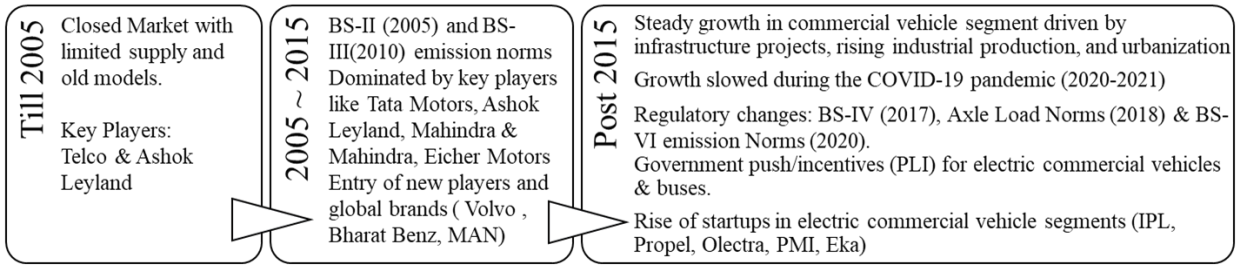


Exhibit 1.1.1 – Evolution of Indian commercial vehicle sector.

1.2. Organisational Description: Tata Autocomp Hendrickson Suspensions Pvt Ltd. (THSL)

Tata Autocomp Hendrickson Suspensions (THSL) is a 50:50 joint venture (JV) company between Tata AutoComp Systems Limited and Hendrickson International Corporation, USA established on 23rd June 2006. THSL board is governed through representation of nominee directors from each of the JV partners. THSL CEO along with the Functional Head constitute THSL Senior Leadership Team (SLT). THSL business operating geography is within India and export through Hendrickson.

1.2.1 Brief note on JV Partners

1.2.1.a Tata Autocomp Systems Limited - Organisation brief: Tata AutoComp Systems Ltd. was established in 1995 to bring auto component technologies into India to serve the emerging Indian Auto Industry. The company is in the business of design, development, manufacturing & supply of auto-component products & services. It operates through its own Divisions, Subsidiaries and Joint Ventures. Each one of these is called a Business Unit (BU). These products & services are being delivered to Automotive OEMs. It has 19 businesses with 61 plants including 8 overseas Plants.

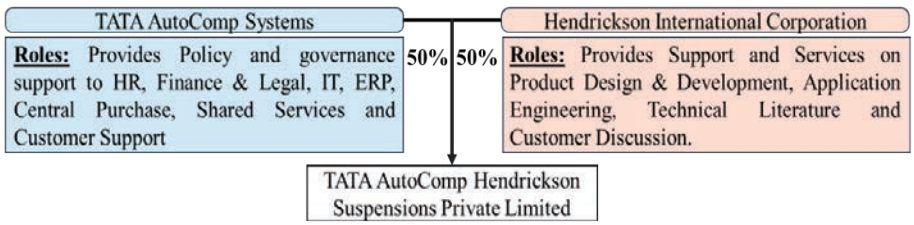


Exhibit 1.2.1 – Role of Joint Venture Partners

1.2.1.b Hendrickson International Corporation – Organization brief: Hendrickson is a privately held business – 100% owned by The Boler Company. Founded in 1913 in Chicago, USA. Hendrickson has 42 facilities worldwide. It is the leading suspension and spring manufacturer to the commercial vehicle industry for Truck, Trailer, Bus and Specialty vehicle applications. The roles of both Joint venture partners are depicted in Exhibit no. 1.2.1.

1.3. What is "Suspension"?

The suspension system (refer exhibit 1.3.1) —including springs, shock absorbers, linkages, and anti-roll bar—connects the vehicle chassis to its axle, absorbing road vibrations and preventing damage to the chassis and cabin while ensuring tire contact with the road. It isolates passengers and

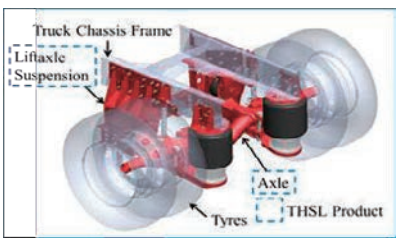


Exhibit 1.3.1 – Location of suspension in vehicle.

cargo from shocks, supports vehicle weight, and works with the steering system to maintain proper wheel alignment. The quality of the suspension is determined by its lightweight design, ride comfort, load-carrying capacity, and low maintenance requirements.

1.4. THSL Business:

THSL specializes in air and rubber suspension systems for MHCVs and EV buses, leveraging internal and Hendrickson's facilities for design validation. Our products, engineered using customer data, field feedback, and competitive benchmarks, ensure superior performance and reliability. Business development manages customer schedules, while procurement sources high-quality components from approved suppliers. These are assembled in-house and shipped as per strict quality standards. Support functions like Quality, Finance, IT, and HR drive functional excellence through CFM to meet customer needs. With a focus on lightweight, reliable, and modular designs, THSL delivers cost-efficient, globally proven suspension solutions with localized engineering and extended field support. The THSL Business Model is shown in Exhibit 1.4.1.

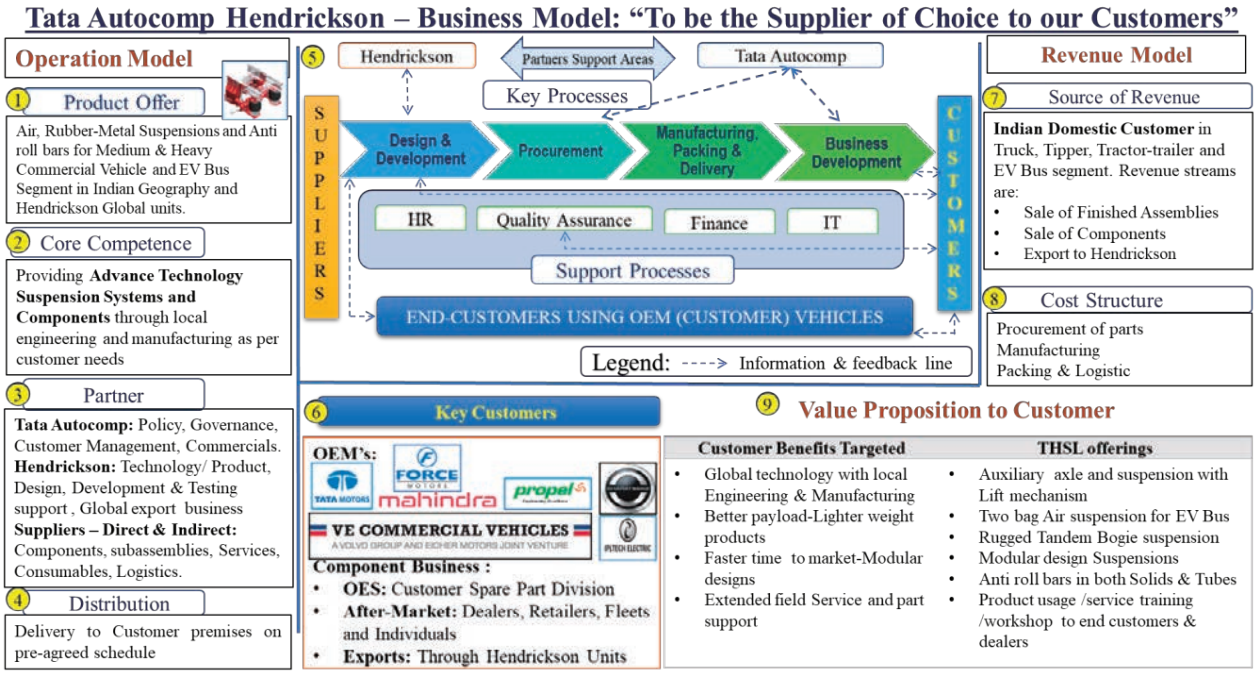


Exhibit 1.4.1 – THSL Business Model

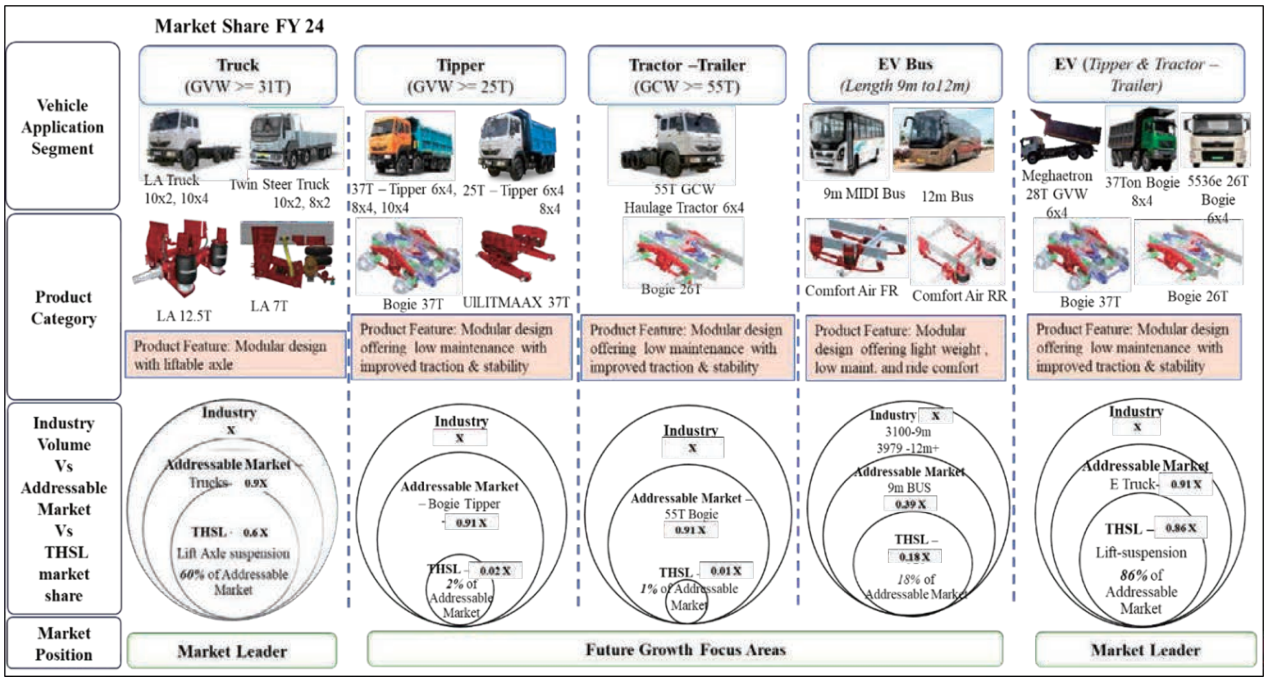


Exhibit 1.5.1 – THSL Product range in CV Segments

1.5 Product Portfolio and Key Customers: THSL Design and Manufacture suspensions for MHCV & EV Bus segment. THSL is the only company in India which has products under suspension category of Rubber and Air-

suspension available across all Medium & Heavy commercial vehicle applications. THSL rubber and air suspension system offers key advantages such as lightweight design, localized manufacturing, and high reliability. THSL association with Hendrickson gives exposure to the product design for global operating conditions and applications. THSL product range covers CV segments of Truck, Tipper, Tractor-Trailor, EV Bus and EV Trucks as shown in Exhibit 1.5.1 and component business as shown in Exhibit 1.5.2. THSL is newly introducing anti roll bars as part of the component business into product portfolio from FY26. Tata Motors Limited (TML) is the main customer of THSL with revenue share of 79% in FY25 followed by MTBD & VECV.

COMPONENT , NEW VALUE SPACE CREATION	THSL Product family Description	THSL Product Picture	Customer Vehicle Description	Customer
	Anti Roll Bar		 Haulage: 5T to 48T Tractor: 55T Tipper:7T to 48T	CNH INDUSTRIAL VOLVO IVECO
	A Frame, Torque Rod and Bushes		 Haulage, Tractor and Tipper 16T to 49T	TATA MOTORS ASHOK LEYLAND VE COMMERCIAL VEHICLES
	Composite Spring		 Mini bus (URBANIA)	FORCE MOTORS

Exhibit 1.5.2 – THSL Component business.

1.6 Customer Quality Performance:

THSL's primary customer, Tata Motors, evaluates its suppliers through the e-Sakha framework, where THSL has been consistently achieving a "capable" supplier status. In the past prior to eSakha framework, THSL has also been rated 100% in ISR (Integrated Supplier Rating). Additionally, VECV and DICV release monthly supplier ratings, in which THSL has received high scores for the past three years. The company is also accredited with the IATF 16949:2016 quality certification, reinforcing its commitment to excellence in manufacturing and process control.

1.7 Organization Structure and Workforce profile

THSL Board consist of 3 representatives from each of the JV partners namely: Tata Autocomp and Hendrickson. THSL CEO reports to the Board. THSL Senior Management Leadership includes CEO and Functional Heads (Refer Exhibit 1.7.1).

THSL has a young workforce with 72% employees below 40 Yrs. 36% of THSL workforce is of professionals / Engineers with graduate or post graduate qualifications. 36% of THSL workforce is in the form of Contract Workforce. THSL imparts required skills to the contract workforce through various training activities – Classroom (Gurukul) and On-the-Job training.

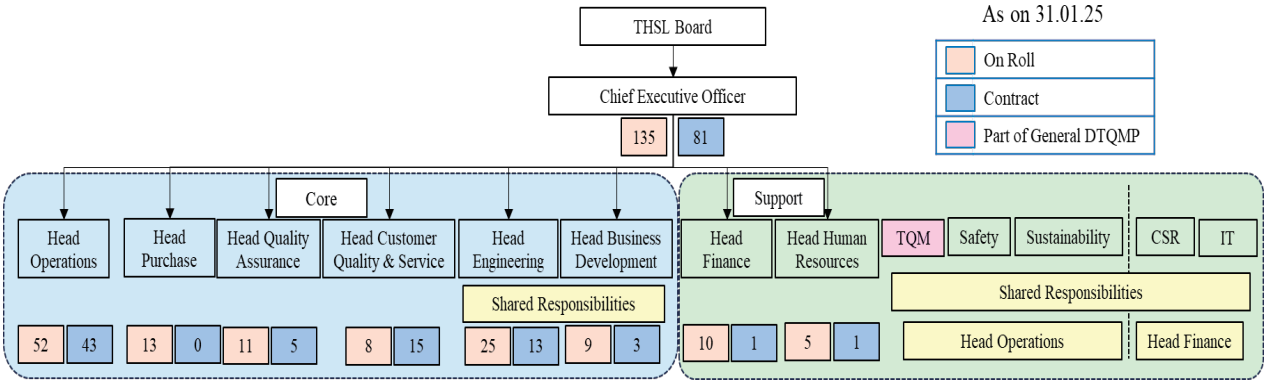


Exhibit 1.7.1 THSL Organization Structure

1.8 THSL manufacturing locations & Capabilities: THSL's corporate office is located in Pune, alongside its state-of-the-art manufacturing facility, which spans 14 acres. This facility is equipped with a dedicated product testing and validation lab. To ensure seamless daily dispatches to the anchor customer, THSL also operates a strategically located manufacturing plant in Jamshedpur. Additionally, the company is establishing a complete manufacturing and assembly process for ARB within its Pune facility.

1.9 Overview of Engineering Capability (Refer Exhibit 1.9.1):

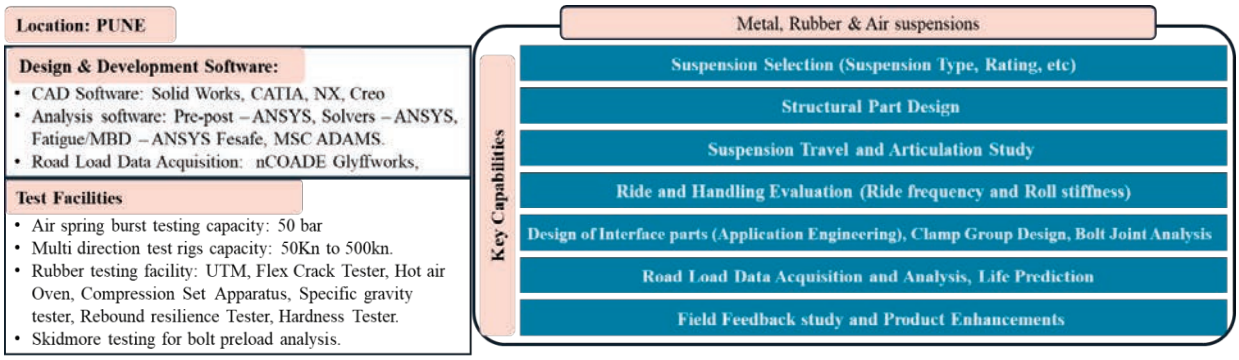


Exhibit 1.9.1- THSL Engineering Capabilities

1.10 Competitive Landscape and Position: THSL operates in a very competitive environment with established OEMs and regional players as major competitors, each offering varied levels of technology, customization, and aftermarket support. THSL enjoys market leadership position in higher payload (12.5T) auxiliary Lift axle suspensions segment with presence across all key OEMS, aspire to be a dominant player in EV Bus and Truck segment with established and emerging OEMs and targeting to be a market leader in defence segment.THSL differentiates itself by offering localized, lightweight, modular, and reliable suspension solutions tailored for MHCVs and EV bus and tuck segment. THSL leverage following approaches to maintain and grow its market leadership position with current and targeted customers as shown in Exhibit 1.10.1.

• **Customer-Centric Product Development:** Leveraging customer feedback, competitive benchmarking, and field data for continuous improvement in quality and cost using Hendrickson technology and product range.

• **Strong Validation & Testing Capabilities:** Utilizing internal and Hendrickson facilities for robust product validation.

• **Optimized Supply Chain:** Partnering with standard suppliers while maintaining in-house assembly to ensure quality and flexibility.

• **Focus on EV-Specific Needs:** Enhancing load distribution, modular, and lightweight designs for electric buses and tippers.

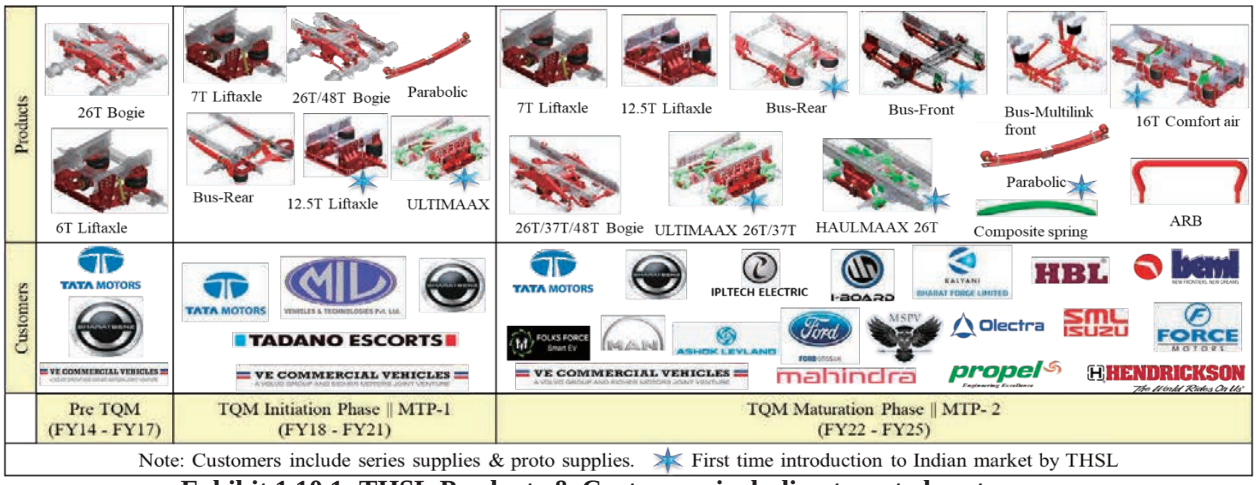


Exhibit 1.10.1- THSL Products & Customers including targeted customers.

1.11 Environmental and Regulatory Framework:

Until FY25, THSL operated under the “Green Category” per government pollution norms but shifted to the “Red Category” in FY26 due to ARB manufacturing. To address this, THSL has identified environmental risks and implemented mitigation measures. Committed to legal and ethical standards, THSL ensures high-quality, safe products while strictly avoiding restricted materials across its supply chain. The company holds ISO 14001:2015 for environmental management and ISO 45001:2018 for occupational health and safety. THSL ESG Framework is aligned with TATA’s sustainability initiative, “Aalingana”, committing to a 25% reduction in absolute CO_2e emissions (Scope 1+2) from the 2020 baseline by 2030 and achieving net-zero emissions by 2045. THSL is also preparing for an EcoVadis ESG assessment to proactively meet global customers sustainability requirements.

1.12 Service to the Society:

THSL actively contributes to society wellbeing through CSR initiatives focused on education, skill development, environmental sustainability, and community welfare. The company supports local schools, sponsors vocational training, supports infrastructure needs and promotes environmental conservation through tree plantation and water body conservation initiatives. Employees are encouraged to volunteer for community initiatives, including orphanage food support, education programs, blood donation camps, street dog rehabilitation ("Sahajeevan") and disaster relief efforts. THSL collaborates with multiple NGOs to enhance healthcare access and hygiene systems for children and women, promote local art and music talent ("Panditotsav") and strengthen community services. Senior leaders play a key role in CSR efforts, ensuring effective resource allocation through need assessment, finalize action plans, and allocate budget and resources effectively.

1.13 Awards and Recognition from Customers and Professional Industry Bodies:

THSL has received numerous awards and recognitions for its excellence in quality, delivery, and new product development (NPD) performance. Customers have acknowledged THSL's commitment to high standards, while industry bodies such as CII and ACMA have honoured the company for achievements in quality, Kaizen initiatives, environmental sustainability, and health & safety. A glimpse of key awards include:

Category	Year	Recognition & Awards
Customer	FY22	Special Award for Contribution in Proprietary Parts by VECV
	FY24	Best New Product Development (NPD) support from Mahindra Trucks and Bus Division
	FY25	Best quick development partner by Olectra
Industry/ Institutional body	FY23	GOLD AWARD in the 37th Quality Circle competition conducted by QCFI, Pune Chapter.
	FY24	PLATINUM AWARD in INNOVATIVE KAIZEN CATEGORY in the 46th NATIONAL KAIZEN COMPETITION.
	FY24	Platinum winner in 13th NATIONAL POKA YOKE COMPETITION arranged by CII.
	FY25	Won Gold award in QCFI Kaizen 2025 Competition, Pune Chapter.

Chapter 2: Business Objectives and Strategies

2.1 Background:

In 2008, THSL commenced its operations in Pune by establishing a manufacturing footprint offering Lift Axle and Bogie type suspension products for commercial vehicle segment to its anchor customer; Tata Motors Ltd. (TML). THSL established a dedicated design centre, testing /validation lab and metallurgy lab during 2012 timeframe to build local engineering competency to accelerate the new product development and expedite market introduction in response to the growing commercial vehicle market technology, product needs and business growth aspirations.
Further in 2013, THSL added a dedicated field service team to offer extended support to end customers and dealers through spare parts support as well as education and training on new products and technologies. In pursuit of business expansion and customer diversification through existing and new products, THSL further expanded its manufacturing footprint in 2022 in Jamshedpur primarily for TML suspension products and recently in 2024 in Pune primarily for non-TML customers, new products such as bus suspension, ARB and component business. Since 2008 till the pre-TQM period over a span of 10 years, THSL sales increased by eight-fold from INR 43 Cr. in FY09 to INR 354 cr. in FY17 driven by Lift Axle and Bogie suspension for TML, DICV and VECV as the major customers.

2.2 Pre-TQM stage: FY14 to FY17

In the pre-TQM phase, THSL net sales increased at a CAGR of 25% from INR. 181 Cr. in FY14 to INR. 354 Cr. in FY17 in spite of significant market challenges driven by the cyclical downturn in commercial vehicle industry during FY14 to FY15 and nationwide new emissions regulation (BS-IV) introduction during FY17. THSL performance during this period is depicted in the graphs in Exhibit 2.2.1.

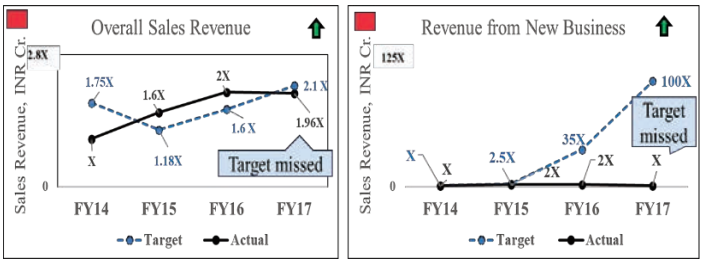


Exhibit 2.2.1- THSL Performance during FY14 to FY17

2.2.1 Key Challenges Identified:

- Growth from new Business/ New Product.
- Warranty Issues in 6T Lift Axle field measured in IPTV.

2.2.2 Key Objectives Accomplished:

- Revenue improved from 181 Cr. in FY14 to 354 Cr. in FY17 i.e. 95% growth at a CAGR of 25%.

- Field Warranty in IPTV for 6T Lift Axle reduced from 31 in FY14 to 8 in FY17 (75% improvement).

2.2.3 Remaining Issues:

- One Safety Incident reported in FY17.
- Dependency on TML increased from 78% to 92% during FY14 to FY17
- Supplier Rejections (SPPM) – Increased from FY14 - 171 PPM to FY17 – 372 PPM
- Revenue from new business (0.2 Cr.) was miniscule in FY17.

2.3 TQM Introduction Phase: MTP 1 (FY18 to FY21):

During this phase of the business cycle, while revenue began improving, it remained heavily reliant on the anchor customer (TML), falling short of long-term growth aspirations through new customer acquisition. To enhance overall performance and customer satisfaction, THSL initiated its TQM journey in 2018. That year, it launched its first Mid-Term Plan (MTP1) for FY18–FY21. The Policy Management framework incorporated inputs from JV partners, Vision, Mission, MTP, and the Balanced Scorecard. The annual business plan was developed using tools like PESTEL, SWOT, customer and competitor analysis, and risk assessment, with effectiveness measured via FSM. This plan was cascaded to functional heads and their teams.

2.3.1 Key challenges identified for MTP1 (FY18~FY21):

1. Improvement in Safety rating through British Safety Counsil (BSC) audit score.
2. Improvement in customer satisfaction (CSAT).
3. Revenue growth with new product and new customer.
4. Reduction in Supplier Rejections (SPPM).
5. Significant reduction of field Warranty of 7T Lift Axle measured in IPTV.

2.3.2 Objectives and Strategies of MTP1 (FY18~ FY21): The detailed objectives and strategies are shown in the below Exhibit No. 2.3.2.

Sl. No.	Objectives	KPI (UOM)	Baseline (FY17)	Target FY21	Actual FY21	Strategies	KPI (UOM)	Baseline FY17	Target FY21	Actual FY21	Student Type FY21
I.	New business with existing and /or new product	Rs. Cr.	0.2	33	68.9	Business from New Product	Rs. Cr.	0	32.8	68.8	A
						Business from Existing Product	Rs. Cr.	NA	0.2	0.1	B
II.	Net Sales	Rs. Cr.	354.3	933 (*88)	161.6	Revenue from Anchor Customer (TML)	Rs. Cr.	325.7	791 (*76.36)	147.4	D (A)
						Revenue from Customer beyond TML			75		

Exhibit 2.3.2: MTP1 Objectives & Strategies

2.3.3 Remaining Issues of MTP1:

1. Target not met for revenue growth from new products and new customers due to revenue drop during COVID 19 pandemic.
2. Warranty (IPTV) for new product -12.5T Lift Axle was at 39.8 driven by failure of main air spring component.
3. Higher Supplier Rejections (SPPM)- 387 PPM Vs target of 284 PPM, driven by new supplier addition and new part development.

2.3.4 Key Objectives Achieved (MTP1):

1. Achieved 92% Safety BSC Score in FY21.
2. Zero customer rejections (CPPM).
3. Upgraded 6T to 7T Lift Axle within two weeks to meet government norms (FY19).
4. Introduced 14 new part numbers across Lift Axle, Bogie & EV Bus segments.
5. Reduced 7T Lift Axle field warranty (IPTV) from 8 to 3 (62% improvement).
6. Revenue grew from ₹X Cr (FY17) to ₹1.39X Cr (FY19), but dropped during COVID to ₹0.56 X Cr (FY20) and ₹0.45X Cr (FY21).

2.3.5 Learnings from MTP1:

1. Implementation of British Safety Council Standard, helped to achieve ZERO Reportable accidents (LTIFR).
2. Utilization of problem-solving QC tools and Workforce involvement in QCC (8 nos) led to sustenance in zero customer rejection and reduction of inhouse rejection to 47 PPM vs target of 183 PPM.
3. Based on the 12.5 T Lift Axle Warranty IPTV – 39.8, it was realized that the new product development process needs improvement in the area of new application analysis, end customer usage and field testing.

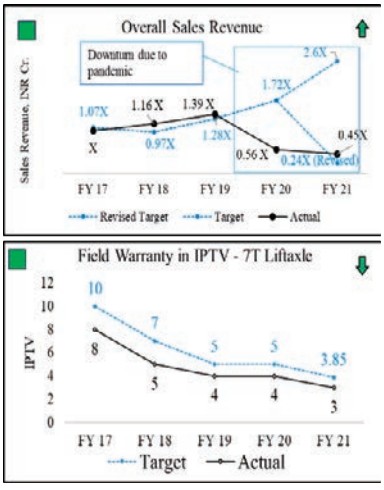


Exhibit 2.3.4 THSL Performance from FY17 to FY21

4. Based upon the analysis of Supplier Rejection it was observed that the new suppliers with new parts were contributing more towards SPPM. New supplier assessment/selection and new part development PPAP process needs to be strengthened to improve SPPM.

2.4 TQM Maturation Phase: MTP 2 - FY22 to FY25:

During MTP-1 cycle, the COVID-19 pandemic adversely impacted THSL business in terms of revenue growth as shown in exhibit 2.3.4. In view of the slower commercial vehicle market recovery post pandemic and considering THSL growth aspirations, THSL recognized the need for a systematic approach to identify new growth areas beyond current avenues as well as the potential new products and customers. THSL also re-casted the Vision to align with new growth aspirations during MTP-2 cycle as shown below (Exhibit 3.3.3.1(a) for THSL PM cycle framework).

THSL Vision (MTP2): To be the most preferred suspension system solution provider in domestic MHCV & EV BUS segment.

THSL Mission (MTP2): To be the Supplier of Choice to all stake holders by delivering compelling value through differentiation in Safety, Sustainability, Quality and Constant Innovation.

Explanation of Vision Statement: To become the most preferred suspension solution provider by FY29. THSL will measure its performance in the following parameters.
Quality: Achieve Warranty complaints (IPTV) to Zero, Achieve Customer Rejection as Zero, Sustain Monthly Customer rating at 100%, Supplier Rejection – 100 PPM.
Development: 11 New Products and 8 new Customers.
Technology: 6 nos
Growth: Achieve the turnover of Rs 1,700 Cr and
Market Share - 73% in 12.5T Lift Axle, EV Bus - 39%.

Explanation of Mission Statement: To become the suppler of choice by 2029, THSL will measure its performance in the following parameters.
Safety: TSHMS Score > 2.0
Sustainability: ESG score > 90%.
Innovation:
No. of key innovations > 2/ year
Digitalization > 6/ year.
Employees: Employee satisfaction score > 85%. Achieve 100% TEI.

Long-term business aspirations of THSL were aligned through its revised Vision and Mission statement while keeping its values (Integrity, Pioneering, Excellence, Unity and Responsibility) same as Tata Group values.

2.4.1 Key Challenges identified for MTP2 (FY22~FY25):

1. Revenue growth with new product and new customer to overcome the revenue drop during pandemic
2. Significant reduction of field Warranty of 12.5T Lift Axle measured in IPTV
3. Reduction in Supplier Rejections (SPPM)
4. Manufacturing footprint expansion and capacity development to support growth with current and new customers.

2.4.2 Learnings from Deming Diagnosis:

1. Limited understanding of PM and DWM and the linkages – PM and DWM parameters were segregated, MP – CPs were captured in PM KPI's and DWM Deck structure revised and implemented at departmental level.
2. Objectives were identified without strategy linkage – Both the MTPs were restructured covering the strategies with measures through KPI's.
3. Increased number of Student C in the FSM of MTP1 due to insufficient deployment practice of planned strategies- Strategies against each objective were defined and analysed with the KPI's with improved FSM understanding.

2.4.3 Development of MTP–2 Cycle: The policy management cycle (Refer Chapter 3, Exhibit 3.3.3.1a) was further improved by introduction of "Catch Ball" for target setting and deployment of MP-CP from BU Head cascading to next working level as shown.

In order to grow the revenue as per the revised vision, THSL used inputs from VOC, PESTEL and SWOT to identify new growth opportunities in EV (Bus & Truck air and bogie suspension), defence (bogie suspension) and component business segment for domestic (Bogie components, ARB) and exports (ARB) market. These opportunities were further quantified using "TAM/ SAM analysis" as shown in exhibit 2.4.3 THSL further developed ANSOFF matrix approach to prioritize these opportunities and target customers to approach with existing or new product offerings as shown.

In order to achieve the long-term growth objective in MTP2 and beyond, THSL identified below key themes:

- Grow & maintain business with TML being its anchor customer.
- Grow business beyond TML with new products and new customers.

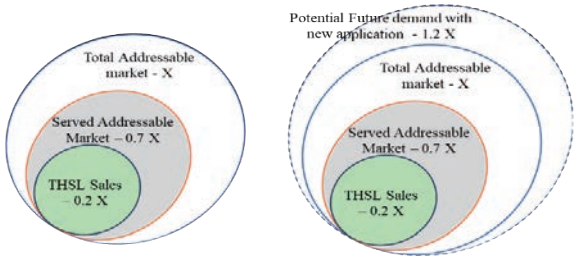


Exhibit 2.4.3 THSL Growth Avenues & Ansoff Matrix

2.4.4 Objectives and Strategies of MTP2 (FY22~ FY25):

In order to grow the revenue in line with the vision, THSL has identified opportunities along with target products and customers. Post TQM diagnosis feedback in FY23, MTP2 (Rev.00) objectives and strategies were further refined and aligned into MTP2 (Rev. 01). The key focus areas and strategies identified for MTP2 (Rev.01) are given exhibit 2.4.4.1.

2.4.4.1 Safety – Safety is a top priority at THSL. THSL has adopted British Safety Counsil (BSC) standard in MTP-1 and the same migrated to TSHMS in 2023. THSL is also certified with ISO45001.

2.4.4.2 Customer Rejection – THSL is leveraging QRB process, Vertical Evaluation, QA matrix and Flag System to analyse and resolve customer concerns. Effective training on problem solving tools and improved workforce engagement in QC circles are the enablers to attain targeted competency requirements.

2.4.4.3 Overall Warranty IPTV 12.5 T Lift Axle – Flag System is implemented across all customers, products, components and failure modes along with CFM approach to embrace the culture of systematic problem-solving.

2.4.4.4 Net Sales – THSL is focusing on increasing and sustaining share of business with existing customers using existing products, ensuring sufficient capacity development at Pune and Jamshedpur plants. THSL also targets revenue growth in Bogie components, aftermarket business, exports to Hendrickson US and EU.

2.4.4.5 Market Share of EV Bus Suspension – From PESTEL and SWOT analysis, growth opportunities are identified in EV Bus segment for new front and rear suspensions of 9m and 12m platform for OEMs/.

2.4.4.6 Grow Beyond TML – To achieve customer diversification, THSL developed Ansoff matrix to identify growth opportunities with new customers using existing products and new customers using new products.

2.4.4.7 ARB Project – From SWOT analysis, THSL has identified opportunity to target new geographies by export to Hendrickson using a new product; Anti roll bar (ARB). THSL has planned to establish design, testing/validation and manufacturing capabilities of ARB locally by acquiring complete manufacturing, testing setup from a company in UK starting with exports to European customers and later with local customers.

2.4.4.8 EBIDTA Improvement Projects – THSL has identified opportunities of cost optimization in raw material through VA/VE, direct expenses and manpower efficiency using detailed cost tree analysis. The execution and progress monitoring are done using a CFM approach through EBITDA digital portal.

2.4.4.9 Establishing Manufacturing plant in Pune to suit future needs – Through SWOT analysis, THSL identified opportunities to expand its business into new geographies, EV segment and new product category. Since inception, THSL was operating in a rented facility till Feb. 2024 with limited space (3,400 sq. mtr) constraining future expansion to support new products. THSL decided to construct a new plant in Chakan starting from Apr. 2022 with adequate space (21,000 sq. mtr) and capacity to meet the current and future growth aspirations.

2.4.5 Business Objectives and Strategies of MTP2 :

Exhibit 2.4.4.1 shows the targets and effects at the end of FY25 and effectiveness measured using FSM approach ABP for FY25 is revisited and revised for sales and financial targets due to significant reduction in commercial vehicle market sales. The revised targets are mentioned in MTP 2 table.

2.4.6 Remaining Issues from MTP 2 (FY22~FY25):

1. Customer rejection (CPPM) is increased to 143 against the target of 0 PPM for FY25.
2. Supplier rejection (SPPM) is increased to 962 against the target of 285 PPM for FY25.
3. 12.5T Lift Axle warranty (IPTV) has shown improvement & dropped to 119 but missed the target of 45 IPTV.
4. Net sales for FY25 are INR 483 Cr. Vs. revised target of INR 473 Cr. Vs. original target of INR 747 Cr. is missed due to low demand of all key products, driven by commercial vehicle market slow down.
5. New business sales revenue is INR 40.1 Cr. Vs. revised target of INR 40 Cr. Vs. original target of INR 108 Cr. is missed due to cancellation of 12.5T Steer axle project and demand drop in ULTIMAAX & BUS suspension.

Sl No.	Business Focus Area	Objectives	Managing Point of Performance	KPI (UOM)	Baseline (FY21)	Target FY25	Actual FY25	Strategies	KPI (UOM)	Baseline FY21	Target FY25	Actual FY25	Student Type	Strategy Type
I.	Safety	Safety	Reportable Accidents (LTIFR)	Nos.	0	0	0	BSC/ TSHMS Score	%/ Rating	92%	1.9	1.9	A	Base building
								Potential Near miss incidents	Nos.	12	6	7	B	Base building
II.	Exceed Customer Expectations	Achieve highest rating from customer	Customer Rejection	PPM	0	0	143	Inhouse Rejection	PPM	0	0	0	C	Base building strategy Chapter 5.1
								Supplier Rejection	PPM	387	285	962	D	
								Direct Pass Ratio	%	100%	100%	100%	C	
		Drive **Excellence in Field Warranty** performance on major products **Lift axle 7T** and Liftaxle 12T for TML	Overall Warranty Incidences Per Thousand Vehicle - 12T Liftaxle (12 MIS)	IPTV / Nos	173	45	119	TML Warranty Incidences Per Thousand Vehicle - 12T Liftaxle (12 MIS)	IPTV	173	45	116	D	Challenging strategy Chapter 4.1
								Warranty reduction projects	Nos.	3	3	3	C	Challenging
								New Pr...						

Exhibit 2.4.4.1: MTP2 Objectives & Strategies

2.4.7. Key Learnings from MTP 2 (FY22~FY25):

1. Customer rejection is primarily driven by supplier parts passed on to customer & supplier rejection has increased primarily for new part development, hence need to strengthen supplier PPAP process for new products.
2. Warranty analysis shows vehicle application issues in the field, hence need to strengthen vehicle application sign off, as part of NPD process.

3. Modular new product development approach in bogie is benefitting THSL to add new customers.
4. Despite of low sales, effective CFM Approach in cost saving projects is helping THSL to meet EBITDA savings.
5. Dedicated program manager & CFM approach for 9m bus suspension led to breakthrough entry into Olectra.

2.4.8. Challenges for MTP3 (FY26~FY29):

1. Revenue growth recovery due to market slow down to meet FY29 vision.
2. EV bus suspension market share improvement.
3. Scale up of component business and ARB export business.
4. Breakthrough improvement in 12.5T Lift Axle warranty, customer and Supplier Rejections for new products.
5. Capability building for ARB - application engineering, design, testing and business development.
6. Reduction of Energy intensity to meet ESG targets.

Chapter 3 : TQM Promotion

3.1 Background: THSL began its TQM journey in April 2018, with FY14–FY17 considered the "Pre-TQM" period, serving as the baseline for business performance. TQM implementation was phased, starting with the Initiation Phase (MTP1: FY18–FY21) and followed by the Maturation Phase (MTP2: FY22–FY25). In FY23, the Deming Diagnosis provided valuable insights into TQM practices and their impact. As MTP2 concludes, THSL is preparing for the next phase, TQM Excellence (MTP3: FY26–FY29), with the Deming Examination in FY26 marking a key milestone of its journey. The THSL TQM journey is illustrated in Exhibit 3.1.1

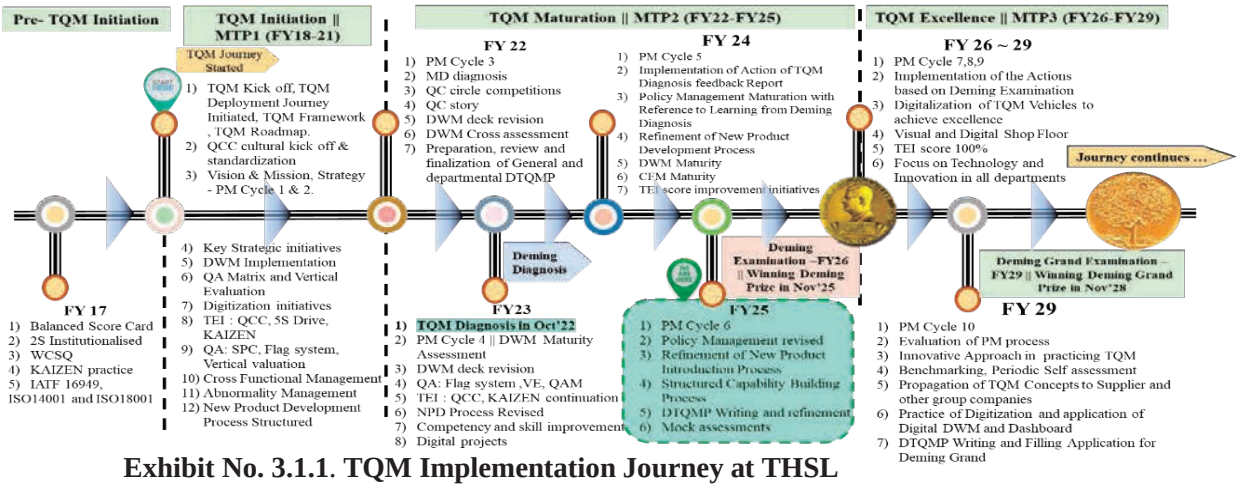


Exhibit No. 3.1.1. TQM Implementation Journey at THSL

3. 2 TQM Deployment at THSL

3.2.1 Need for TQM: To achieve its ambitious growth goals, THSL recognized the need to enhance critical processes such as new product development, quality assurance, supply chain, productivity, and employee capability. To drive this transformation, the leadership team adopted TQM as a key enabler for organizational excellence.

3.3 TQM Journey: During the Pre-TQM period, THSL focused on quality improvement through IATF 16949, WCSQ, QCC initiatives, and employee engagement programs like 5S and Kaizen. With the implementation of TQM in MTP1 and MTP2, the company has progressively matured, as outlined in the TQM Maturity Model (Exhibit 3.3(a)).

Phases of TQM Promotion		TQM Initiation Phase MTP1 (FY18 -FY21)	TQM Maturation Phase MTP2 (FY22 - FY25)
Objectives		**THSL Objective:** Improve Business Performance. **TQM Objective:** Initiate TQM Practices for systematic Quality improvement in product development and process improvement.	**THSL Objective:** Improve Customer Quality, Winning new customers & Profit. **TQM Objective:** Sustain & Improve TQM Practices for overall performance improvement of the organization.
Key Challenges in TQM Promotion		• TQM awareness across all levels • TQM promotion in support functions • Measuring the achievement and performance level of policy items • Lack of cross functional approach • Improving employee involvement in KAIZEN, QCC and QC Story	• Improving **PM process** in terms of levels of target, **alignment with strategy and evaluation through FSM** • Continuous improvement of **DWM maturity through evaluation of stability and capability study and DWM Audit** • Permeation of TQM Practices to all employees **through employee involvement** • Resolving high impact & complex chronic issues through QC Story Projects and CFM approach
Organizational Capabilities	People	• Structuring the training programs from induction to capability building in terms of - TQM awareness, Policy management, DWM, QCC, 7QC Tools and Problem Solving tools. • **Employee involvement** in KAIZEN, QCC, QC story initiated	• **Updated the training structure** in terms of Leadership Development, Functional /Technical , Organizational and TQM training and evaluation of training effectiveness. • **Skill and Competency upgradation** based on individual TNI. • **Building competency** inline with technology and digitization roadmap • **Training of Senior Management** on TQM awareness through JUSE international seminar on TQM, and advance TQM Awareness Program • **Competency development** for application of higher statistical tools
Organizational Capabilities	TQM Systems	• **Policy management** – Business environment scanning through PESTEL, taking inputs from SWOT and risk assessment, preparing Mid Term Plan (MTP), and evaluation of performance through FSM. • **DWM implementation**– in Manufacturing and Support function, DWM assessment and scoring. • **TQM Tools and Techniques** -QA matrix, 2x2 Stability and capability matrix, • **Structured problem saving and TEI** - through KAIZEN, QCC and QC Story approach. • **Cross Functional Management** tough practicing of Management System Chart in terms of Quality, NPD, Delivery, and Cost.	• **Policy Management** - Improving effectiveness of policy management system & target level of policy items through FSM and Target coerce correction based on Market analysis. • **DWM Maturation** - Improving stability and capability of process through practicing DWM, Process Improvement through upgradation of standards and Updating of DWM Assessment Criteria. • **TQM Tools and Techniques** - Maturation of practice of TQM tools and Techniques through the application of QA matrix, 2x2 Stability and capability matrix, Vertical Evaluation, Flag Systems Quality Function Deployment, Value Mapping and many other. • **Structured Problem Solving and TEI** - through, involving temporary manpower in Kaizen and QCC, creating standard QCC Teams, using appropriate statistical tools in QC story projects and practicing of problem solving and task achieving QC Story projects. Digitized portal to create repository of KAIZEN, QCC and QC stories and tracking employee involvement. • Leveraging **Cross Functional Management (CFM)** for initiatives like Employee Engagement, Warranty Management, Safety Management, Sustainability Management and Morale in addition to MTP1 practices.

Exhibit 3.3(a): TQM Maturity Model

3.3.1. Improvements Based on feedback from Deming Examiners: Feedback from Deming Examiners was categorized (high, medium, low priority) for action planning (Exhibit 3.3.1).

Action Summary	High	Medium	Low	Others	Total
Number of Action Points	10	9	5	20	44
Action Completed	10	8	4	20	42

Exhibit 3.3.1: Deming Examiners Feedback

3.3.2. TQM Promotion:

3.3.2.1: TQM Promotion Organization: The TQM organization structure was first established in FY19 and updated in FY23; the structure includes - Steering Committee and Functional Core Committee (Refer Exhibit 3.3.2.1).

3.3.2.2 THSL TQM Framework: THSL introduced structured TQM approach in FY19 and further refining it in FY23 to align with its aggressive Vision. The revised framework prioritizes focused methodologies, continuous PDCA cycles, and a robust tracking and review system. Built on TATA Values & Society, Standardization (7S), and Capability Building, the framework represents THSL's commitment to its Vision and Mission. (See Exhibit 3.3.2.2 for THSL TQM framework)

3.3.3. Management Approach: The deployment of TQM Vehicles are shown below:

3.3.3.1 Policy Management (PM): THSL's Policy Development and Deployment is integrated into its annual planning system. Launched in October 2019, the PDCA cycle is reviewed annually, with the sixth cycle completed in March 2025. The Mid-term Planning (MTP) cycle spans four years, with MTP3 (FY26–FY29) set to begin next.

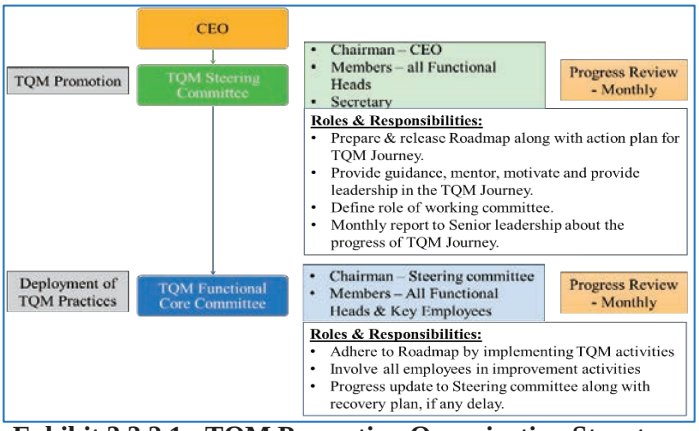


Exhibit 3.3.2.1 - TQM Promotion Organization Structure

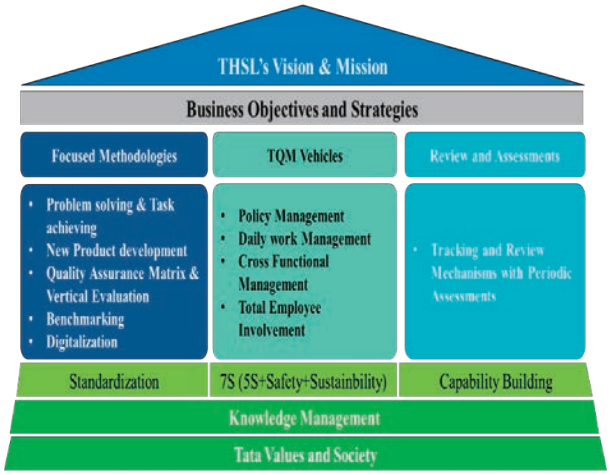


Exhibit 3.3.2.2 – THSL TQM Framework

Enhancements in FY23:

Following the Deming Diagnosis, THSL refined its Policy Management process for greater agility and effectiveness:

- Annual Business Planning (ABP): The ABP process and policy implementation stages are added in terms of PDCA.
- Catch-ball Sessions: Integrated at all levels for structured feedback.
- CEO's ABP Updates: Allows for mid-year revisions based on half-yearly reviews to enhance adaptability.

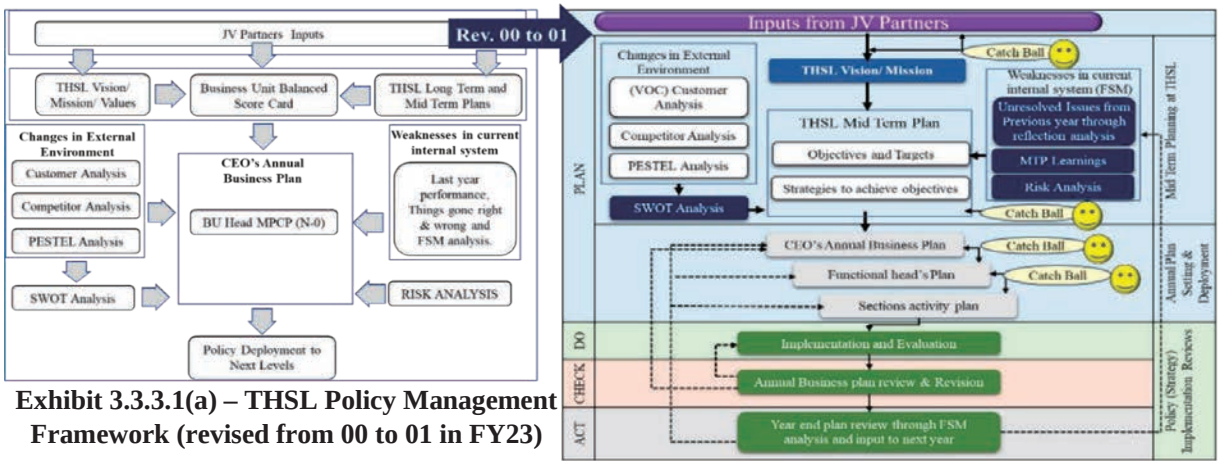


Exhibit 3.3.3.1(a) – THSL Policy Management Framework (revised from 00 to 01 in FY23)

This structured approach enables better business target achievement through PESTEL, SWOT, Risk, Competitor Analysis, and past performance insights (FSM). (See Exhibits 3.3.3.1(a) & 3.3.3.1(b) for details on policy refinements and cascading).

Policy Management Effectiveness: The process effectiveness of Policy Management is done through FSM. The overall Journey of Policy Management Process Improvement and FSM for MTP2 is shown in exihibit 3.3.3.1 (c).

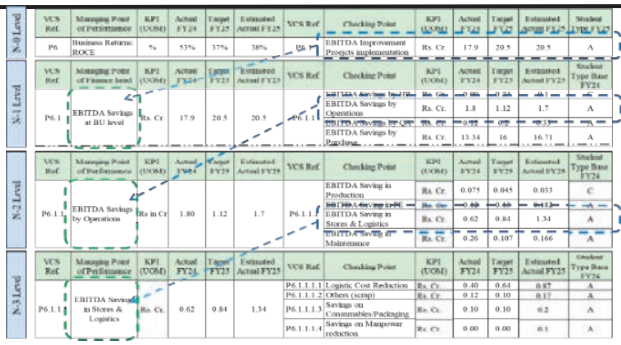


Exhibit 3.3.3.1(b) – Cascading of Policy Management

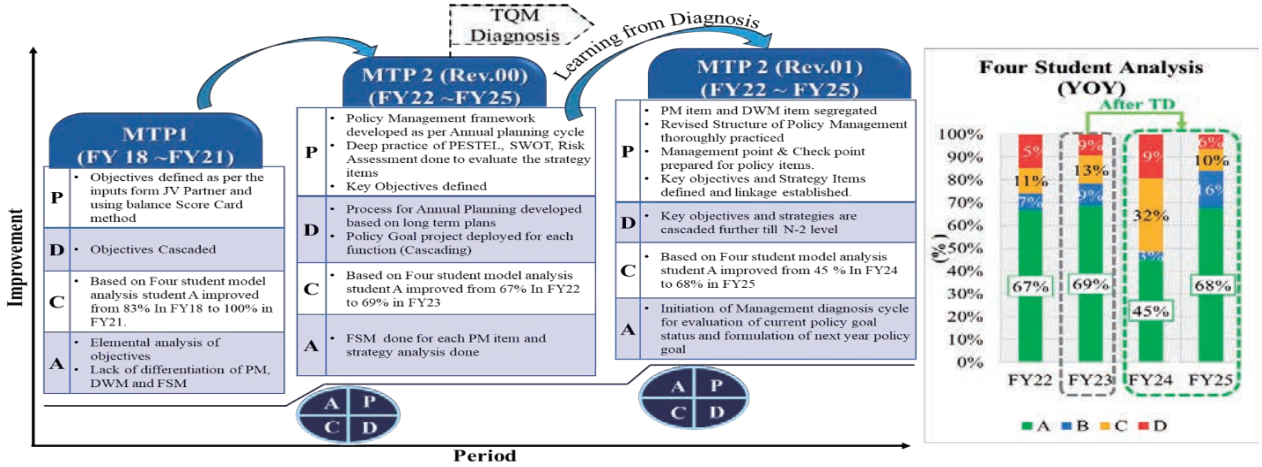


Exhibit 3.3.3.1(c) – Policy Management Effectiveness Validation

3.3.3.2 Daily Work Management (DWM): Daily Work Management Framework is depicted in Exhibit 3.3.3.2(a). It is implemented across all levels and functions to ensure consistency in routine activities. Employees follow the SDCA cycle for daily, weekly, and monthly tasks to achieve sustained improvements. Each function maintains a DWM deck, which includes the function's purpose, organizational structure, employee roles and responsibilities, key performance indicators (KPIs) with their units of

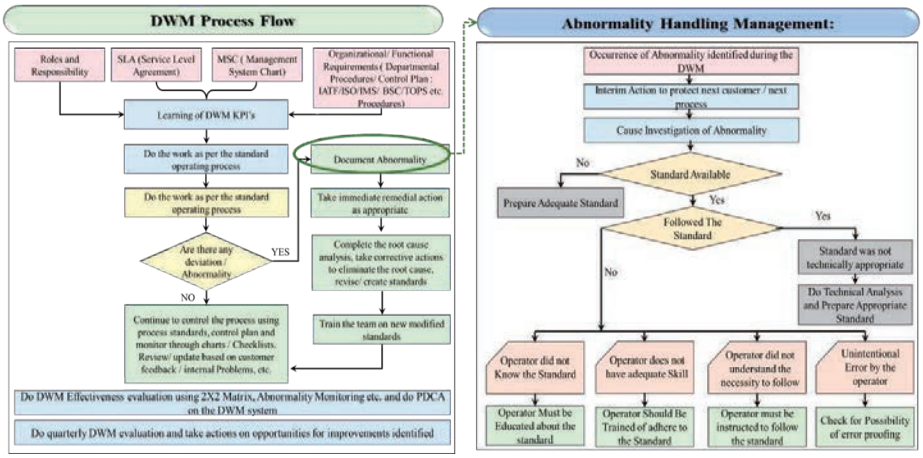


Exhibit 3.3.3.2(a) – Daily Work Management (DWM) framework

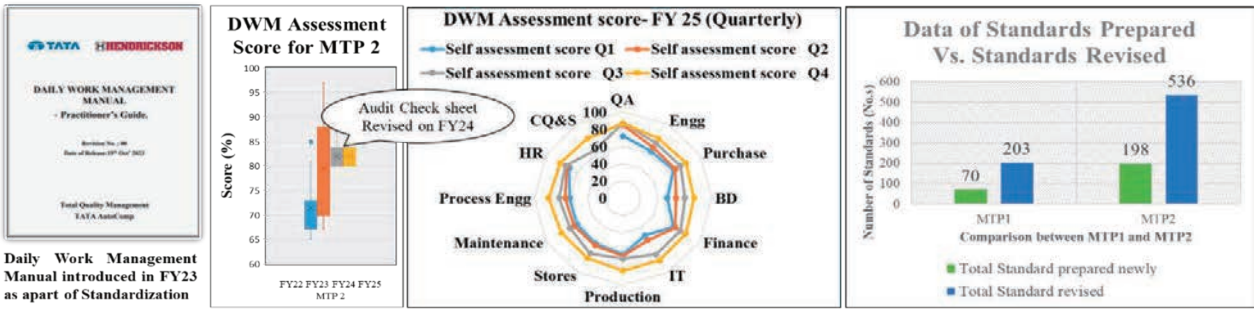


Exhibit 3.3.3.2(b) – DWM Assessment score analysis and standard prepared vs. revised

measure, and a system for tracking KPIs and managing abnormalities through an abnormality tracker. Any identified abnormalities are addressed by developing new standards or updating existing ones as needed. The DWM

Assessment Score Tracker, along with details of revised and newly created standards, is outlined in exhibit 3.3.3.2(b).

3.3.3.3. Cross-Functional Management: THSL's Cross-Functional Management (CFM) approach enables focused and collaborative actions to achieve organizational goals. It enhances decision-making, minimizes management losses, and creates an agile value chain, leading to improvements in Safety, Quality, Delivery, Cost, Productivity, Morale and Environment (SQDCPME) performance. The scope of CFM, along with its process

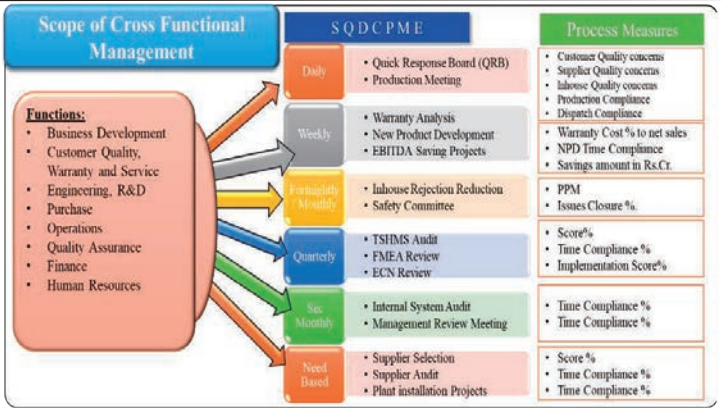


Exhibit 3.3.3.3(a) – Scope of Cross Functional Management

Cross Functional Management (CFM)	CEO	Engineering	Business Development	Purchase	Operations	Quality Assurance	Finance	Human Resources	Customer Quality, & Service	Frequency	Performance Measure
New Product Development	□	■^	□	□	□	□	□	Δ	□	Weekly	Number of part numbers developed (Nos.)
Product Delivery	□		□	□	■^	□	Δ	Δ		Daily	Delivery Compliance (%)
Product Quality	□	□	Δ	□	□	■^			□	Daily	No. of Issues Reported Vs Closed (Nos.)
Cost Savings	□	□	□	□	□		■^	□		Weekly	Savings achieved (Rs. Cr.)
Employee Engagement and Morale	□	□	□	□	□	□	□	■^	□	Monthly	Total Employee Involvement (TEI) Spread in % on Improvement programs
Warranty Management	□	□		□		□	□		■^	Weekly	IPTV Reduction (Nos.)
Employee Capability	□	□	□	□	□	□	□	■^	■^	Weekly	IPTV Reduction (Nos.)
Safety	□	□	Δ	□	■^	□	Δ	□	□	Monthly	TSHMS Score (Nos.)
Sustainability	□	□	Δ	□	■^		□	□		Monthly	Score (%)

■ : Strong Relationship, □ : Moderate Relationship, Δ : Weak Relationship, ^ : CFM Leader

List of Management System Charts (MSC)

Sr No	Description
1	MSC for QA system
2	MSC for NPD
3	MSC for Abnormality Management
4	MSC for Policy Management
5	MSC for Cost Management
6	MSC for Productivity
7	MSC for Delivery Management
8	MSC for Employee Morale
9	MSC for Employee Capability Building
10	MSC for Safety Management
11	MSC for Sustainability Management

Exhibit 3.3.3.3 (b): Relationship matrix of Cross Functional Management (CFM) approach and list of MSC.

measures, is detailed in Exhibit 3.3.3.3(a), while the relationship matrix of the cross-functional structure is explained in Exhibit 3.3.3.3(b). To ensure effective implementation, THSL follows a structured Management System Chart, with a comprehensive list of management systems outlined in the same exhibit.

3.3.3.4 Total Employee Involvement (TEI):

THSL classifies improvements into three levels (Refer Exhibit 3.3.3.4(a)) and as a part of standardization THSL has prepared TEI Manual and integrated all the improvement methodology.

Applicability Matrix – Employee Involvement in Improvement Activity			
Improvement Methodology	Employee Category		
	Staff	Permanent Worker	Contract Worker
KAIZEN	√	√	√
Quality Control Circle (QCC)	X	√	√
Problem Solving QC Story	√	O	X
Task Achieving QC Story	√	O	X
Legends : (√) Applicable, (X) Not Applicable, (O) Involvement not mandatory			

Exhibit 3.3.3.4(a): Improvement Project Levels and Applicability Matrix

1. KAIZEN – Employees participate in **Kaizen initiatives,** improvements are documented and reviewed through an internal portal. Best Kaizens are recognized and rewarded.

2. Quality Control Circle (QCC) Projects – Led by workforce and supervisors, addressing chronic shop-floor issues identified through DWM to improve SQDCPME parameters.

3. QC Stories – Cross-Functional Teams (CFTs) tackle key chronic issues affecting SQDCPME KPIs.

Additionally, **5S** forms the foundation of all improvements. The plant is divided into zones, with monthly audits and score reviews for continuous enhancement and sustenance.

Safety Initiatives: THSL adopted the British Safety Council standard in 2018 and transitioned to Tata Safety & Health Management System (TSHMS) in FY23. Key measures include safety inductions, Unsafe Act, Unsafe condition, near-miss reporting, and quarterly audits. The company has maintained 3,100+ accident-free days and zero LTIFR for the past eight years.

In **Total Employee Involvement (TEI)** scoring process the active engagement of employees in Suggestions, Kaizen, QCC and QC Stories are calculated (Refer Exhibit 3.3.3.4(b)). In FY25, contractual employees were also incorporated under TEI coverage. To boost TEI, THSL introduced a Rewards & Recognition (R&R) Scheme, **increasing TEI from 75% (in FY17) to 98% (in FY25).**

3.3.4. TQM Promotional/ Initiatives:

3.3.4.1. TQM Awareness and Trainings: THSL has implemented comprehensive TQM training programs across all levels to drive business growth and enhance problem-solving capabilities. In 2018, all managers and supervisors received training from an external expert on TQM principles, tools, and methodologies. TQM education and training framework focuses on business growth and enhancing problem-solving skills across all levels, including senior

management, staff, permanent operators, and contract workers. The framework and its coverage are detailed in Exhibit 3.3.4.1.

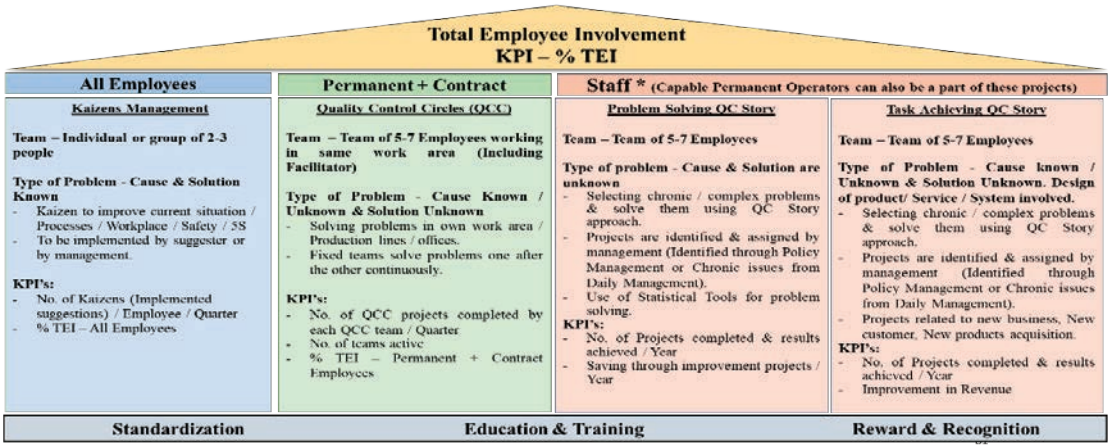


Exhibit 3.3.3.4(b): Total Employee Involvement (TEI) Framework

Cadre	Level-1	Level-2	Level-3	Coverage
Top and Senior Management	• Basics of TQM concepts & its vehicles – PM, DM, CFM, TEI (Including QC circles) • Principles of Policy Management • t & Role of Senior Leadership	• Development of PM through Internal & External Environment Analysis (Reflection of Past – FSM, PESTLE Analysis, SWOT, Cross SWOT Analysis) • Structured Problems Solving through 7 Step QC story approach and basic 7 QC Tools. • DM through SPC using control charts, stability & Capability Analysis, Abnormality management, CAP-Do Analysis, Development of 2x2 matrix.	• Benchmarking for enhancing Business performance • Task achieving QC story • Diagnosis at Gemba • Use of Statistical tools	91.49%
Faculty	External			
Middle Management	• Basics of TQM concepts & its vehicles – PM, DM, CFM, TEI (Including QC circles) • Overview of TQM adoption Techniques	• DM through statistical process control using control charts, stability & capability analysis, abnormality management, CAP-DO Analysis, Development of 2x2 matrix. • Structured problems solving through 7 step QC story approach and basic 7 QC tools. • Internal auditor training on ISO standards & 6S.	• Task achieving QC story • Advanced statistical tools • Lead Auditor Training for ISO Standards .	89.74%
Faculty	Internal	External	External	
Junior Management	• Basics of TQM concepts & its vehicles – PM, DM, CFM, TEI (Including QC circles) • Workplace Management through 6S.	• DM through statistical process control using control charts, stability & capability analysis, abnormality Management	• Task achieving QC story • Structured problems solving through 7 step QC story approach and basic 7 QC tools.	92.97%
Faculty	Internal	External	External	
Operator & Trainee	• Basics of TQM concepts & its vehicles – DM, TEI (Including QC circles) • Workplace Management through 5S.	• Problem Solving Tools, DWM .		96.25%
Faculty	Internal	External	External	

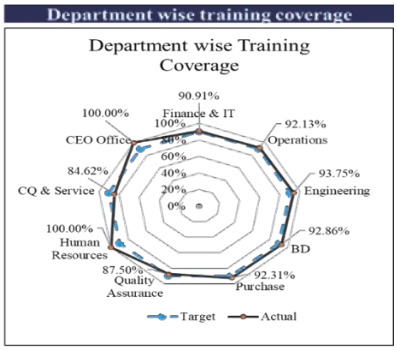


Exhibit 3.3.4.1: THSL Education and Training framework and department wise training

3.3.4.2. Knowledge Management: At THSL, information is systematically collected and analysed from both the market and within the organization to build and utilize operational knowledge effectively. The Knowledge Management framework is detailed in Exhibit 3.3.4.2.

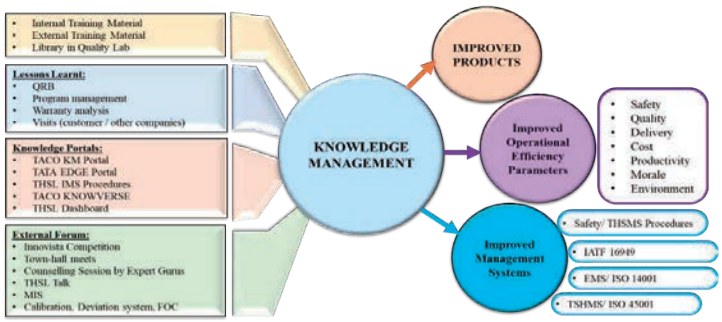


Exhibit 3.3.4.2: THSL Knowledge Management Framework

3.3.4.3. Digitization, Information & Communication Technology (ICT): THSL developed an internal Knowledge Management portal as a centralized repository for safety, quality, HR policies, IMS, and TQM. A digital dashboard with controlled access allows employees to report abnormalities, submit Kaizens, provide suggestions, and track warranty management.

3.3.4.4. Visits to Deming Prize Winning Companies: As part of its learning initiatives, THSL's senior team visited Deming Prize-winning companies like Ashok Leyland, TVS Motors, and Apollo Tyres to study their best practices. Additionally, they participated in the JUSE training program in Japan, visiting Toyota, Yuasa, and Konica.

3.4. Effects of TQM Promotion: The effects are as follows-

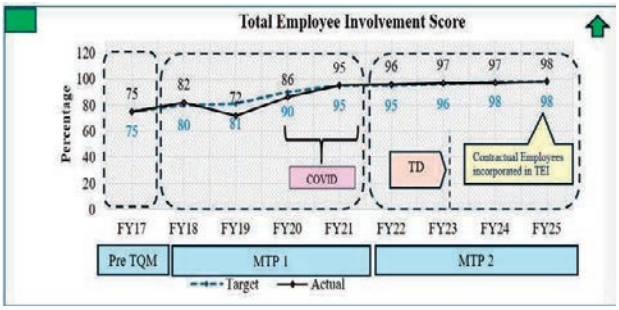


Exhibit 3.4.1: Total Employee Involvement (TEI) Score

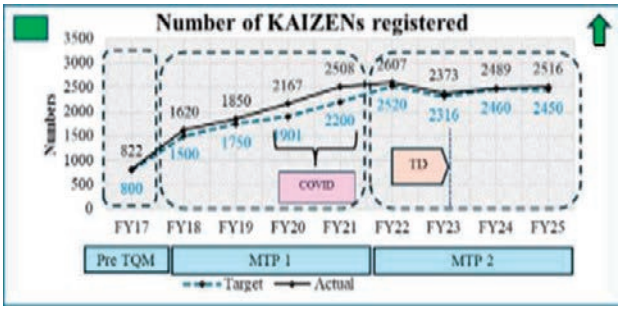


Exhibit 3.4.2: Number of Kaizen year on year

3.5 Relationship Matrix of MTP2 Managing Points and TQM Vehicles and Key Tools & Techniques:

Objectives	Managing Point of Performance	TQM Vehicles				Focused Methodologies								
		Policy Management	Daily Work Management	Total Employee Involvement	Cross Functional Management	New Product Development	Vertical Evaluation	Quality Assurance Matrix	Problem Solving and Task Achieving: KAIZEN	Problem Solving and Task Achieving: QCC	Problem Solving and Task Achieving: QC Stories	Benchmarking	Digitization (ICT)	Knowledge Management
Safety	Reportable Accidents (LTIFR)	●	●	●	●				●	●	●	●	●	Δ
Achieve highest rating from customer	Customer Rejection	●	●	●	●		●	●	●	●	●	●	●	Δ
Drive **Excellence in Field Warranty** performance on major products **Lift axle 7T** and Lift axle 12T for anchor customer TML	Overall Warranty Incidences Per Thousand Vehicle - 12T Lift axle (12 MIS)	●	●	●	●	●	●	●	Δ	Δ	●	●	●	●
	Net Sales	●	●											

Exhibit 3.5 Relation between MTP 2 to the TQM Practices

Chapter 4: Practice of Challenging Strategies

Chapter 4.1: Challenging Strategy: Reduction of TML Warranty Incidences Per Thousand Vehicle - 12.5 T Lift axle (12 MIS)

4.1.1. Program Background – Lift axle suspension is an auxiliary Air suspension, which increases the overall Tonnage of vehicle by amount of suspension rating. THSL was having 7T Lift axle, which can carry 7T Load with single axle with single tyre. Single axle with twin tyre norms, came in year 2018 & THSL introduced this 12.5T Lift axle in 2019. Due to load carrying capacity, the suspension named as "12.5T Lift axle". The model gained volumes over years due to its load rating of 48T, in similar packaging space of 42T vehicles. By FY23, approximately 30,000+ vehicles are equipped with this Twin tyre Lift axle technology, demonstrating its increasing adoption and success because of vehicle performance & load rating. THSL is focused on improving component durability, implementing changes to reduce failure rates, enhance vehicle uptime to meet customer expectations.12.5T Lift axle has higher contribution amongst all Product volumes in FY23. TML 12.5T Lift axle has major contribution for IPTV (12MIS) among other 12.5T Lift axle customers. Hence TML 12.5T Lift axle product is focussed for 12MIS - IPTV reduction. TML 12MIS IPTV Trend chart for TML 12.5T Lift axle. FY22 period IPTV is observed on higher side compared to earlier. Exhibit 4.1.1.5 shows, Pareto chart is plotted for FY22 matured batch for 12MIS. Top contributors components, are Main Air spring(31.5%), Failure mode B (20.8%), Failure Mode C (16.7%). Using CFM (for warranty), FM-B & FM-C are resolved. " Resolution of Main Air spring IPTV reduction" case study is demonstrated below -

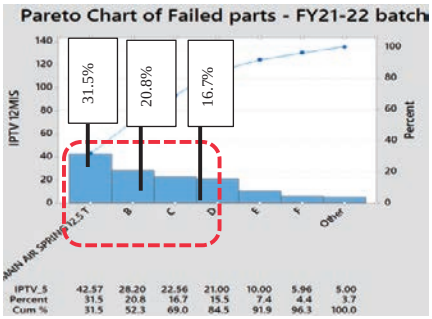


Exhibit 4.1.1.5 – Pareto chart for FY22

4.1.2. Strategy & focused Activity in MTP1 & MTP2

MTP 1 & remaining problems (Refer Exhibit 4.1.2.1)

Phase	Objective	Focused Activity	Effects	Remaining problems
MTP1	Drive Excellence in Field Warranty performance on products - Lift axle 7T* & 12.5T Lift axle for anchor customer TML	1) Connect with End customer for understanding RWUP 2) 12.5T Lift axle products improvements using QC story approach, based on End customer (From field) feedback.	12MIS IPTV of 12.5T Lift axle for FY22 =XX vs Target of YY	1) 12.5T Lift axle - 12MIS IPTV observed higher side e.g. Main Air Spring failures, FM-B

Exhibit 4.1.2.1 – MTP1 & remaining problems

* - 7T Lift axle IPTV reducing trend & below the target, hence 12.5T Lift axle is focussed.

Focussed activity planned in MTP-2 (refer Exhibit 4.1.2.2)

BU objective	Challenging strategy	KPI	Focussed Activity	KPIs
Drive Excellence in Field Warranty performance	Overall Warranty IPTV – 12.5T Lift axle (12 MIS)	Warranty failure in IPTV	Closure actions on Top contributor Warranty field failure modes for 12 MIS	No of failure modes resolved for reducing 12MIS IPTV
			Closure actions on Top contributor Warranty field failure modes for 3 MIS	No of failure modes resolved for reducing 3MIS IPTV

Exhibit 4.1.2.2 – MTP2 challenging strategy & KPI

4.1.3. Challenges identified in MTP2- 12.5T Lift axle (TML customer) IPTV reduction from XX to YY till FY25. The Challenges in reduction of 12MIS IPTV is depicted.

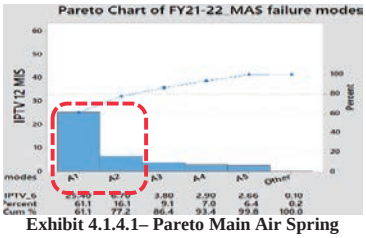


Exhibit 4.1.4.1– Pareto Main Air Spring failure mode FY22 Period

4.1.4. A Case study on 12.5T TML Lift axle Warranty IPTV (12MIS) reduction, by resolving Main Air Spring (MAS) failures.

Main Air Spring (MAS) is a critical component in 12.5T lift axle (Exhibit 4.1.4.1). MTP2 analysis shows, It is a Top contributor in 12MIS IPTV for TML customers. We used 12MIS maturity data (i.e. FY22) to identify the various failure modes & its contribution in IPTV.

4.1.4.1. Problem definition – High warranty 12MIS IPTV for Main Air springs, observed in FY22. Exhibit 4.1.4.1 shows Failure Mode A1 & A2 are top contributor failure modes.

4.1.4.2. Observations - Using flag system, the data is funnelled down from Overall, to critical component to critical failure mode, to Supplier wise.

4.1.4.2.1 Flag System- Flag system for Analysis of Main Air Spring failures & Multilevel pareto used for Supplier wise analysis. Air spring suppliers are proprietary in nature & has different design of bellow, Piston & bump stop. Hence Main Air Spring design Benchmarking is challenge.

4.1.4.3. Analysis -Further analysis of Main Air Spring – FM-A1, we jointly analysed the failed parts & Field condition with Supplier T & understood that Higher articulation has significant impact on the membrane at rear side, where stretch is higher. Refer Exhibit 4.1.4.3 for detailing of Process improvement. Inference – Higher articlation causes cord stretch in MAS, results into cord breakage & leakage process.

4.1.4.4. Actions -While working on fabric cord, Supplier T Technical experts suggested to optimise the overstretched fabric cord length. Solution proposed ("FM-A1" Failure mode)– cord length reduced from XX to YY mm. We tested 3 samples of each design, till failure. 5 times B10 life improvement observed.

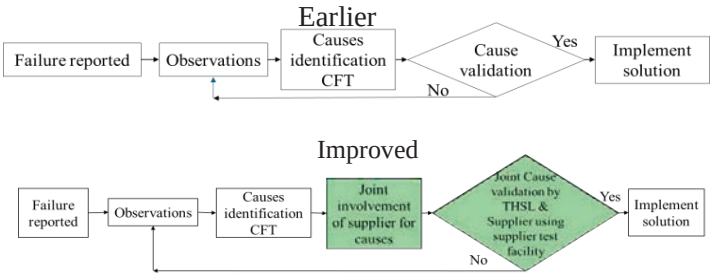


Exhibit 4.1.4.3 – Improvement in analysis

4.1.4.5. Check– failure mode Trends show improvement after action implementation.

For Results– FM-A1 shows Reduction in IPTV trend, while comparison of FY22 & FY24 Main Air Spring failure modes. Red & Yellow colour respectively indicate "FM-A1 & FM-A2" failures. However other 2 failure modes are – FM-A3 & FM-A4 are increasing. THSL decided to have "CAP-Do" analysis on the same.

4.1.4.6. Standardisation

- Flag system Incorporated in Warranty MSC - Internal DVP standard revised

4.1.4.7. Learning – 1) Supplier involvement in analysis 2) Problem solving with Statistical data analysis

4.1.5. CAP-Do Analysis – (refer Exhibit 4.1.5.1)

Check	Act	Plan	Do
3/6/12 MIS IPTV for any abnormal Trend / Peak	Containment actions, Root cause analysis & Permanent Corrective actions	Implementation plan	Monitoring closely for Improvement

Exhibit 4.1.5.1 – Cap-Do analysis

THSL started using **3MIS IPTV** as lead indicator to gauge the product performance in early stages after implementation. 3MIS Trend chart, which shows MAS failure is steeply increasing, because of Tipper Model introduction in-3MIS). **Causes for MAS – FM-3 failures –** 1)Air spring not rolling over piston 2) Higher load cause reduced chassis height.

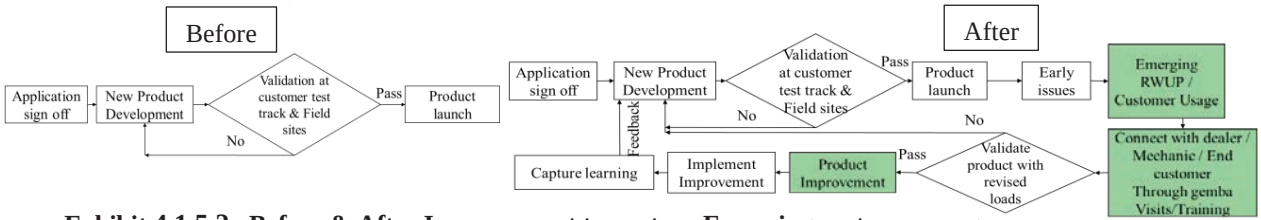


Exhibit 4.1.5.2– Before & After Improvement to capture Emerging customer usage

Exhibit 4.1.5.2, shows process improvement & capturing learning wrt 3/6 MIS issues resolution.

4.1.5.a Actions – 1) Height of MAS reduced from A to B mm, 2)Trailing arm modified with round plate & cover for smooth rolling 3) Residual pressure in MAS & increase in LAS pressure.

4.1.5.b Check - since this solution is implemented Recently. We are monitoring the same effects of the same. The similar changes are horizontally deployed in Similar product.

4.1.5.c Verification of any side effect or Impact of the solution –The profile of cover having bend radius, which will smoothly roll over the Air Spring rubber without damage. Hence "No impact" will be expected on any interaction part with Main Air Spring.

4.1.5.d Standardisation

1) Capturing Emerging issues in 3MIS process modified 2) DFMEA updated 3) Horizontally deployed in other product of 12.5T Lift axle.

4.1.5.e Learning – 1) 3MIS IPTV tracking importance 2) Application RWUP understanding. 3) Pneumatic circuit understanding

4.1.5.f Capability Building –1) Better understanding of RWUP condition of tipper 2) Decision based on statistical analysis.

4.1.6 Future plan –

Design test for product (Bring field to lab)- 1) It is important to understand Real World Usage for 12.5T Lift axle & improving the lab validation, as per field condition. 2) Capturing product issues during internal lab validation.

NPD process – 1) Using 3MIS early indicators, we can capture early feedback & do product improvement. 2) Short seeding (prior to SOP) can also help in getting the product feedback.

Field Training & data capturing – 1) Visiting Dealer's end warranty garage parts can be checked, where dealer changes the parts to make vehicle on-Road. 2) Competition information & benchmarking can be helpful understanding best workable design solution available. This can be incorporated in design.

Chapter 4.2: Challenging Strategy: Establishing a state of art Manufacturing plant at Pune by Dec-23.

4.2.1 Background: THSL has made MTP 2 (FY22-25) in Mar-22 & includes the launch of 12 new products by FY29 and a volume ramp-up for 10 existing products (Refer Exhibit 4.2.1.1). To support this growth strategy and address chronic inefficiencies in the current plant such as long material flow distances, excessive pallet movement, and different areas for sub-assembly and main assembly areas, THSL requires 4x of space.

Objectives	Strategies	KPI (UOM)	Target FY25	Departmental Strategies	KPI (UOM)	Target FY25
Focus on adding new products and manufacturing capabilities of key suspension parts - ARB	Establishing manufacturing plant at Pune to suit future needs & eliminate chronic problems by Dec-23.	%	100%	Plant Operations shifting plan adherence	%	100%

Exhibit 4.2.1.1 – Linkages to MTP 2

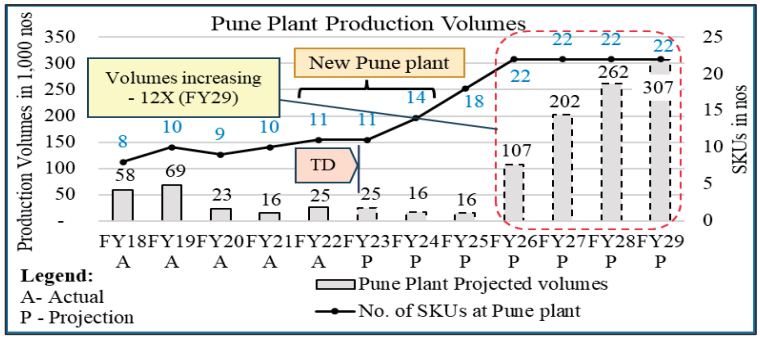


Exhibit 4.2.2.1 – Projected volumes & SKUs in FY22

4.2.2 Project scope and objectives (Why it is challenging?): Given the existing space constraints, THSL has planned the development of 4x state-of-the-art manufacturing facility & eliminate chronic issues of current plant by December 2023 to accommodate new products (Refer Exhibit 4.2.2.1).

4.2.3 Implementation of Challenging strategy:

4.2.3.1 Challenges of Implementation: The project focused on constructing a future-ready plant with an optimized layout while ensuring seamless equipment relocation and installation. Chronic issues for existing plant were identified, with proposed solutions detailed in Exhibit 4.2.3.1.

Category	Chronic problems	Reason	Proposed solutions
Safety	No sepearte walkway for man movement	Space constraint in the layout to accommodate all equipment, storage space & walkways	Provide walkways all along the aisles with 1.1 mtr width.
	Fire hydrant backup system is undersize – 30 Mins.	No space for pump room	Based on the calculation provide enough back up system for 120 mins.
	Limited shop floor space – 3,400 Sq. mtr. & no space for new	Being rented facility no [illegible]	

Exhibit 4.2.3.1 – Chronic issues & Possible solutions of old plant.

4.2.3.2 CFT Formation:

- A cross-functional team was established with clear role definitions (Exhibit 4.2.3.2.1).
- The machine installation layout was discussed with team members, incorporated employee feedback for an optimized and efficient workplace.

#	Function	Members – Primary	Supporting Members	Role of Committee Member
4	Process Engineering	Umesh Kulkarni	Nikhil Suryawanshi	Preparation & implementation of Plant layout & equipment.

Exhibit 4.2.3.2.1 – Project CFT Members & Roles (Truncated Version)

- Budget was prepared considering all items required & approval is taken from management.
- HIRA & other risks were identified and mitigation planned.

4.2.3.3 Identification of wastages: MUDA & MURI were identified in work processes & eliminated/ reduced through optimization of layout.

4.2.3.4 Shop layout optimization for delivery:

a. The shop layout was designed for smooth flow of material.
b. All the activities were implemented as per the project plan with regular reviews of the progress.

4.2.3.5 Actions to achieve zero supply disruptions to customer:

a. Obtained customer demand in advance for affected products during shifting in Feb-24.
b. Built finish goods inventory stock in advance for 5 days of customer schedule.
c. Planned cell-wise shifting of operations.
d. Supplied to the customer from finish goods stock as per their requirement.

4.2.4 Overall Effects:

4.2.4.1 Tangible effects (As on FY24): Civil work delayed due to the monsoon during foundation. The office furniture & interior work is further delayed as the design approval delayed and the tangible effects are given below (Exhibit 4.2.4.1.1).

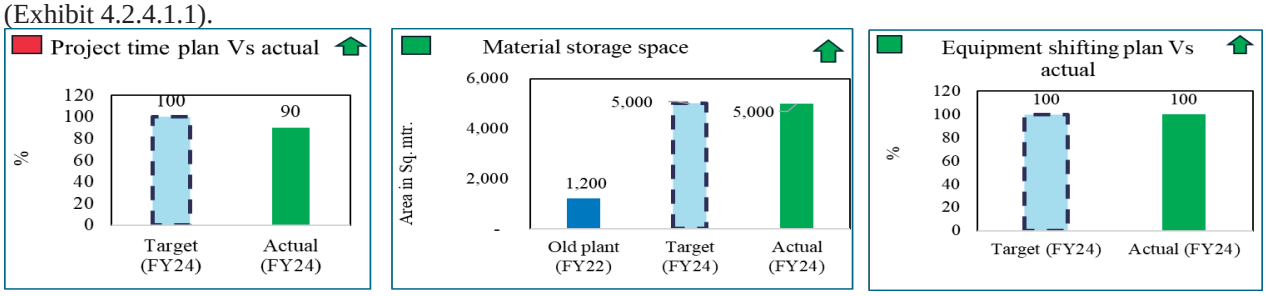


Exhibit 4.2.4.1.1 – Project objectives Target Vs actual.

4.2.4.2 Intangible effects/ Capabilities acquired:	4.2.5 Standardization
1. Gained significant expertise in infrastructure project planning and execution. 2. Successfully applied Lean tools such as Value Stream Mapping (VSM) and cycle time study. 3. Strong capabilities in project risk assessment, mitigation planning, and cost management were developed, to a project budget. 4. Skills in capital equipment negotiations and ensuring complying to all statutory regulations were improved	1. Standard checklist prepared for project execution. 2. PPAP documents prepared & customer PPAP completed. 3. Machine process validation 100% completed after installation at new plant. 4. Assembly fixtures, nut tightening tools calibration 100% completed after installation at new plant.

4.2.6 Things gone right and things gone wrong:

Things Gone Right	Things Gone Wrong
• Zero safety incidents – Achieved one million man-hours without any incident during plant construction. • On time completion of customer PPAPs. • Disruption to customer dispatches - Zero • Better IT infrastructure & complied with ISO 27001.	Project delayed by 3 months, due to unforeseen rains, hard rock & delay in office furniture work.

4.2.7 Future plan: The next phase includes the installation and commissioning of ARB plant.

Chapter 4.3: Challenging Strategy: Introduction of front monoleaf air suspension on TML 9m EV bus

4.3.1 Background

4.3.1.1. Entry into Market: THSL launched its first rear two-bag air suspension for 9m EV buses, replacing customers' existing mechanical suspension—marking a pioneering move in India.

4.3.1.2 Gap in Front Suspension (2021): THSL lacked a front air suspension which is required to gain market share also customer require improved front suspension over existing.

4.3.1.3 Development Initiated: THSL began designing a front air suspension compatible with existing TML mounting points. It was also evaluated for variants in EV bus applications.

4.3.1.4 Market Potential: Studies forecast demand to exceed XXXX units by FY2028-29. Exhibits detail customer targets and volume projections.

4.3.2 Project Setup & Strategic Alignment

- **Technical Business Goals & Timeline:** Technical & business goals, timelines, and customer value addition target were set based on customer requirement and competition analysis.

4.3.3 Execution & Development

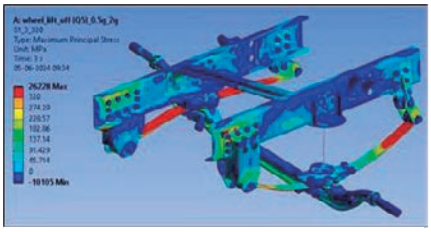
4.3.3.1 Kick-off: Project initiated via THSL gate sign-off; QFD used to translate customer needs into design specs.

4.3.3.2 Concept Finalization: VOC analysis, design goal matrix were prepared and concept was finalized using PUGH matrix.

4.3.3.3 Design & Engineering:

- CAD packaging, bump steer checks, DFMEA completed. (Refer exhibit no. 4.3.3.2)
- FEA identified stress zones; design revised and validated through field measurements (Refer exhibit no. 4.3.3.1)

4.3.3.4 Prototype & RLDA: Suspension fitted on vehicle; RLDA conducted at customer test track to derive load inputs for FEA and physical testing.



4.3.3.1 FEA Front suspension

4.3.4 Testing & Validation

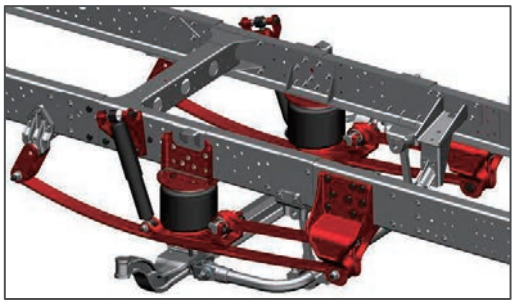
DVP & Trials: Component, system, and vehicle-level tests conducted across varied terrains. Final design approved post feedback and CFT sign-off.

4.3.5 Outcome & Learnings

4.3.5.1 Performance Confirmation: Physical assy./ part measurement & validation completed and compared with technical targets. Wherever discrepancies found necessary design corrections were done and reverified through validation. Business goals were also verified with targets.

4.3.5.2 THSL added new product in it's offering.

4.3.5.3 Capability Building: New design and testing competencies developed in front air suspension which helps in development of variants & new products for different customers.



4.3.3.2 FEA Front suspension

4.4 Challenging Strategy: Winning New Customers for Bogie Suspension Business:

4.4.1 Background

Tata Autocomp Hendrickson Suspensions Ltd. (THSL) encountered a significant turning point in its bogie suspension business. Historically, this segment had contributed substantially to overall revenue. However, following a strategic shift by an anchor customer to internalize production of 26T bogie suspensions (Exhibit 4.4.4.1), THSL experienced a notable decline in business volume along with growing dependency on anchor customer (Exhibit 4.4.4.2). This development coincided with a broader market transition toward higher-tonnage vehicles, particularly in the tipper segment. (Exhibit 4.4.1.3)

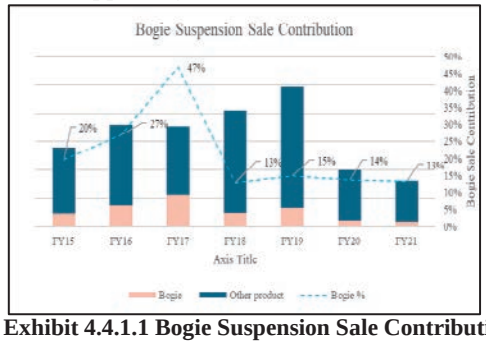


Exhibit 4.4.1.1 Bogie Suspension Sale Contribution

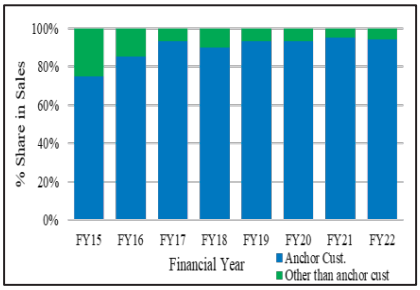


Exhibit 4.4.1.2 Dependency on Anchor Customer

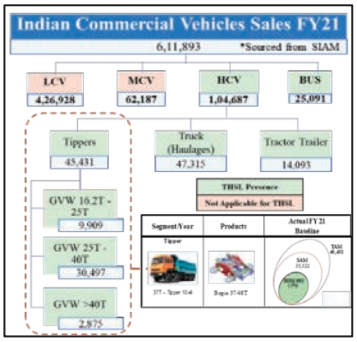


Exhibit 4.4.1.3 Market shifting to higher tonnage tippers

4.4.2 Setting up the task

Recognizing the need to adapt, THSL initiated a comprehensive strategy to re-enter the market with a differentiated offering. The objective was to develop a modular, locally manufactured 37T bogie suspension platform that would meet the evolving requirements of Indian OEMs. The solution needed to

address not only technical specifications but also commercial viability, serviceability, and long-term reliability. (Exhibit 4.4.2.1)

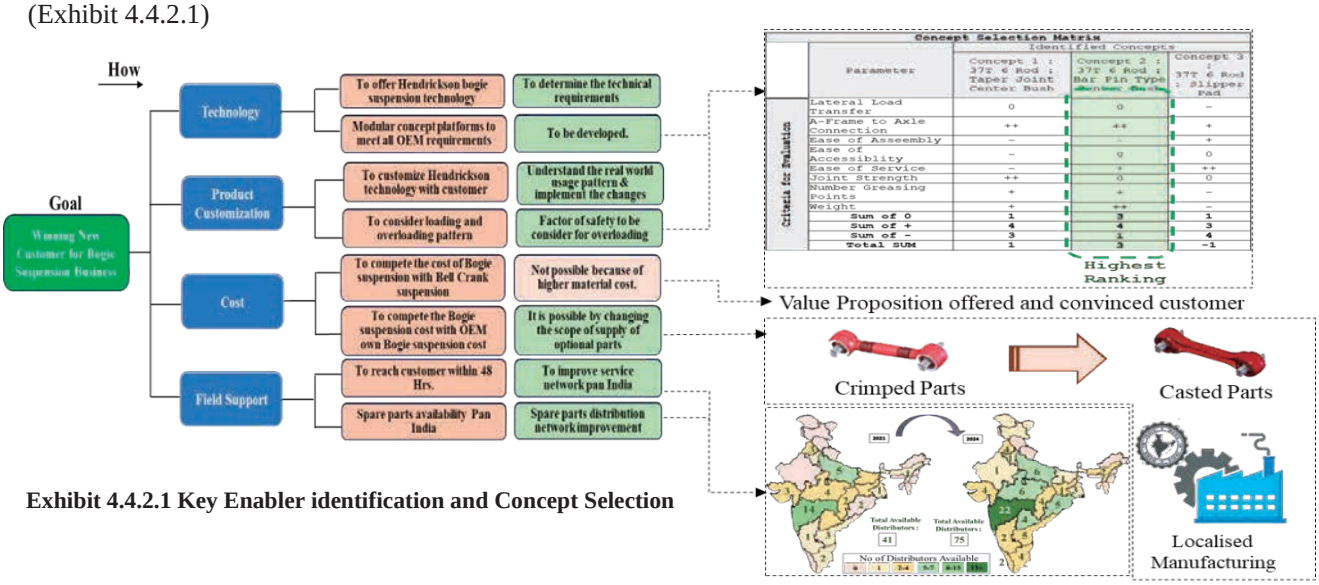


Exhibit 4.4.2.1 Key Enabler identification and Concept Selection

Exhibit 4.4.3.1 Application Case with a leading CV Manufacturer

4.4.3 Implement Scenario

A leading commercial vehicle manufacturer became the first partner in this initiative. Their existing 37T bogie system, sourced internationally, had presented challenges in terms of field durability, maintenance complexity, and overall cost of ownership. (Exhibit 4.4.3.1). THSL responded with a customized suspension system featuring casted torque rods and A-frames, enhanced articulation, and a significant reduction in overall weight. All major components were localized, and the design emphasized ease of service and long-term performance.

From initial inquiry in early 2021 to start of production in 2023, THSL demonstrated a high level of responsiveness and engineering collaboration. Rapid prototyping and accelerated validation enabled the customer to launch their updated tipper platform ahead of schedule. The solution met all technical targets and delivered a cost advantage over imported alternatives. As a result, THSL was awarded full business nomination for the customer's 28T and 35T tipper platforms.

4.4.4 Check

The impact was tangible. The customer's 37T tipper sales increased significantly, and vehicle downtime was reduced from ten days to two with comparatively reduced total cost of ownership to 20%. THSL's contribution was formally recognized with a product development award in 2023, underscoring its commitment to quality and customer satisfaction. Following this success, THSL expanded its customer base to include key OEM and EV manufacturers. Learnings from this program — covering both technical and commercial aspects — have been systematically integrated into THSL's product development and customer acquisition processes. This structured

Sr. No.	Customer	Product Offered	Drawing Approved	Proto sample	Series Supplies
1	Leading CV Manufacturer	37T 6 Rod Bogie Suspension	●	●	●
2	OEM -1		●	●	●
3	EV OEM - 1		●	●	●
4	EV OEM - 2		●	●	○
5	EV OEM - 3		●	●	○
6	EV OEM - 4		●	●	○
Sr. No.	**Customer**	**Product Offered**	**Drawing Approved**	**Proto sample**	**Series Supplies**
1	EV OEM - 3	26T 6 Rod Bogie Suspension	●	●	●
2	EV OEM - 4		●	●	●
3	Defence Cust - 1		●	●	●
4	Defence Cust - 2		●	●	○
5	Defence Cust - 3		●	○	○
6	EV OEM - 5		○	●	●

● Completed ○ In Progress ● Not Started

Exhibit 4.4.4.1 Status on new customer acquisition for Bogie

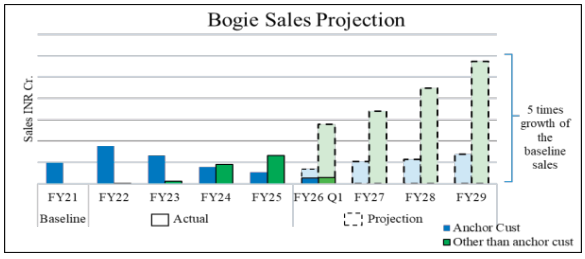


Exhibit 4.4.4.2 Projection for Bogie Sales with and beyond Anchor Customer

approach has enabled THSL to streamline operations and onboard 10 additional OEM customers (Exhibit 4.4.4.1 and 4.4.4.2). The modular platform was deployed across multiple applications, including electric and defence vehicles. THSL committed to full timeline adherence for all new programs, reinforcing its reputation as a reliable development partner.

4.4.5 Conclusion and Future Plan

Looking ahead, THSL has outlined a strategic roadmap through FY29 to scale its bogie suspension business multifold. The plan includes strengthening field support, enhancing spare part availability, and offering a best-in-

class warranty. With a customer-centric approach, cross-functional collaboration, and data-driven decision-making, THSL remains well-positioned to lead the next phase of innovation in heavy-duty suspension systems.

Chapter 5: Practice of Base Building Strategies

Chapter 5.1: Base Building Strategy: Management of Quality

5.1.1 Background

Management of quality at THSL is essential to ensure customer satisfaction and quality performance in all functions. THSL follows a structured approach of Quality Assurance, in alignment with customer specific requirements, IATF 16949 and other applicable standards. The Quality Assurance function is responsible for maintaining process and product quality, ensuring consistency of performance at customer end and meeting established standards.

THSL brings Global Suspension Technology customized for Indian operating conditions for the precise Customer needs.

5.1.2 Quality Management System: THSL ensures Quality in products and processes by adopting TQM tools and techniques such as QA system chart, Vertical Evaluation, Flag system etc

5.1.3 Key Focused Activities:

Sr.No.	Challenges	Focused Activity
1	**IPTV Reduction**	**A1.Reduction in field failure in 12MIS IPTV of 12.5T Lift axle suspension -** Reduction in field failure in 12MIS (lag Indicator) issues using QC story approach / Flag system: Top Indicators – Using CFM & involvement of Suppliers using statistical approach in decision making. **A2.Using 3MIS as Lead Indicator to capture issues in Early stages-** focusing mainly on challenging, yet emerging application
2	**Overall Customer rejection at Zero KM**	**B1. Prevention of Defect occurrence** **i. Detection or prevention controls for Customer Touchpoint** ii. Ensuring effective issue resolution at the Quick Response Board (QRB) and defect matrix **B2. Prevention of Defect Outflow to Customers** i. Enhancing quality gates at the incoming stage to capture Appearance defects ii.2x2 Matrix for Process stability & capability: iii. Implementing a capability enhancement program for quality inspectors
3	**Supplier Rejection**	**C1. Supplier improvement program strategy for high contribution in Supplier Rejection**

5.1.4 Steps for Customer Touchpoint Identification and controls

Detection Stages Moved to Early Stations because of the addition of controls as shown in Exhibit 5.1.4.B1.ii. **Defect Matrix**

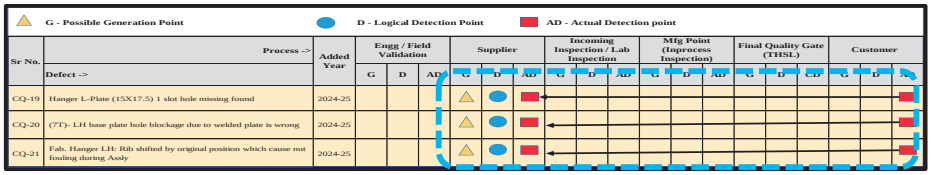


Exhibit: 5.1.4.B1.ii. Defect Matrix

5.1.5: Tangible Effects

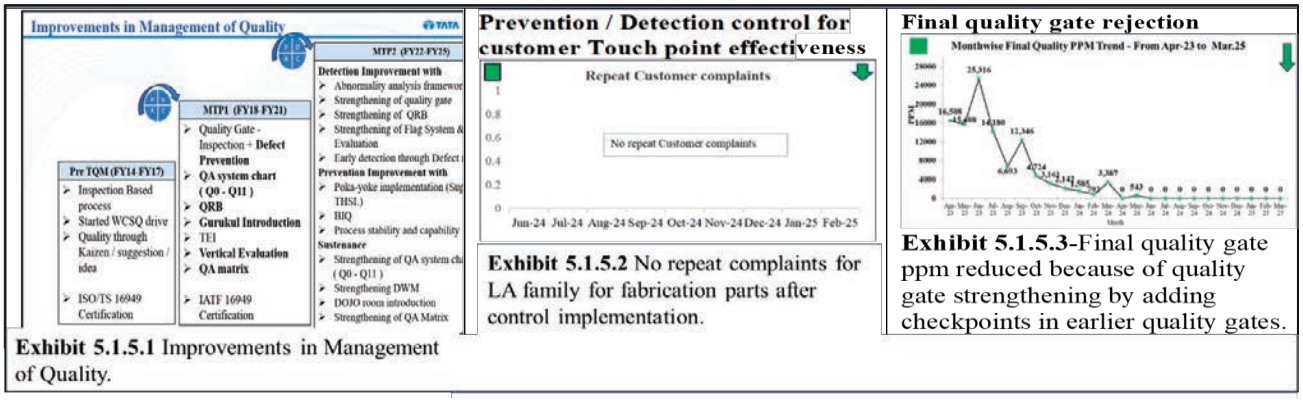


Exhibit 5.1.5.1 Improvements in Management of Quality.

Exhibit 5.1.5.2 No repeat complaints for LA family for fabrication parts after control implementation.

Exhibit 5.1.5.3-Final quality gate ppm reduced because of quality gate strengthening by adding checkpoints in earlier quality gates.

Chapter 5.2: Base Building Strategy – Management of New Product Development

5.2.1 Background:

The New Product Development (NPD) process aims to drive sales growth by launching high-quality products on time and at target costs for all customers. This process focuses on developing new technologies and competitive products for various applications, including tippers, trucks, buses, tractors, and LCVs. Successful product development requires active participation from multiple functions, including Business Development, Engineering, Manufacturing, Quality Assurance, Purchasing, and Customer Quality & Service.

Product development was structured around meeting customer-provided specifications without considering real-world field conditions, user requirements, and behavioral insights. Technology development was also not well integrated with NPD needs and processes. THSL also faced challenge in field performance of newly launched products.

To address these challenges, THSL began driving NPD through cross-functional teams (CFT) in MTP1 and later structured it as a cross-functional management (CFM) process in MTP2 (FY18-FY22). NPD framework was strengthened further to ensure first-time-right product delivery while aligning with customer expectations, market demands, and end-user inputs. Critical success factors targeted are improved First Time Right score, Reduced time to market, Improved field performance and to have less than target IPTV.

5.2.2 Summary of Focused Activities:

5.2.2.1 Creation of Technology Road Map with all stakeholders: Inputs from OEMs, end users, JV partner and CV market trends are critical to formulating the technology roadmap. THSL has created Technology road map in all segments of Truck, Tipper, Bus and Tractor. In each segment there are various technology implementation plans defined. These plans have been distributed in MTP1, MTP2 and MTP3 period. THSL also has created a process for technology development process. In order to evaluate the technology readiness, THSL has adopted the method to monitor the progress of the Technology. Refer Exhibit 5.2.2.1.

5.2.2.1 - NPD CFM Structure Formation

5.2.2.2 NPD Cross-Functional Management (CFM) Structure Formation

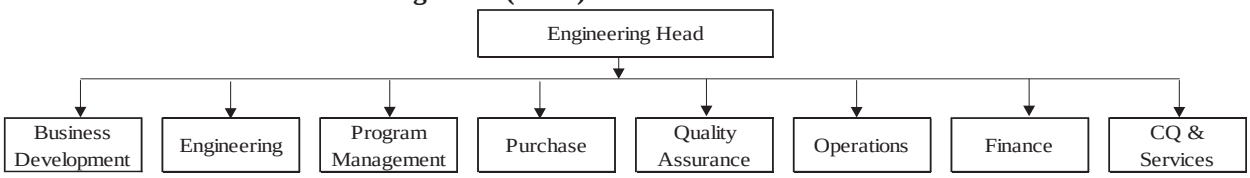


Exhibit 5.2.2.2 - NPD CFM Structure Formation

To drive the NPD process efficiently, THSL has established dedicated cross-functional committees. These teams ensure seamless execution, collaboration, and accountability across all key functions.

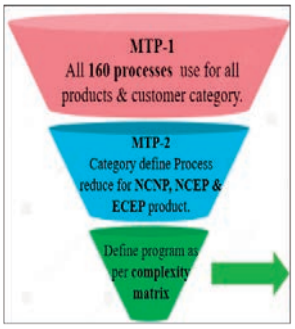
5.2.2.3 NPD Success Criteria

Defined NPD success criteria from customers perspective (both internal and external). Started tracking NPD success rate beyond adherence to timeline.

	SAFETY	QUALITY		COST		DELIVERY		SUSTAINABILITY
Parameter	Meet THSL Product Safety Standard	First Time Right	IPTV	Compliance with Gate 1 sign off value : Product Cost	Compliance with Gate 1 sign off value Investment	Part development, Test and Validation Completion	Time to Market	Meet Zero Landfill requirement
Target	YES	FTR % >92	less than 45	YES	YES	As Per Plan	Less than 18 months	YES

Exhibit 5.2.2.3 NPD Success Criteria

5.2.2.4 NPD Process Optimization for New Customer Existing Products



New Product Development (NPD) Complexity Decision Matrix

Category	High Complexity (Advanced Development)	Medium Complexity (Standard NPD)	Low Complexity (Fast-Track Development)
Customer	New customer, new product	New customer, existing product	Existing customer, existing product
Application	Completely new application, unknown challenges	Some modifications required	Similar to existing product
Process	Extensive research, prototype testing, full-scale validation	Detailed feasibility study, standard validation, pilot production	Rapid prototyping, minimal validation, direct to manufacturing
BoM content	>50% change	10-50% change	<10% change

Exhibit 5.2.2.4 – New Product Development Complexity Decision Matrix

At THSL, we handle multiple customer programs with unique challenges. Using the Complexity Decision Matrix tool, we categorize projects based on design, manufacturing, suppliers, validation, and lead-time risks (Refer Exhibit no. 5.2.2.4)

5.2.2.5 NPD Time to Market: To improve the product development time for new customer, few activities are executed in parallel as per exhibit 5.2.2.5, additionally check points are added to ensure quality.

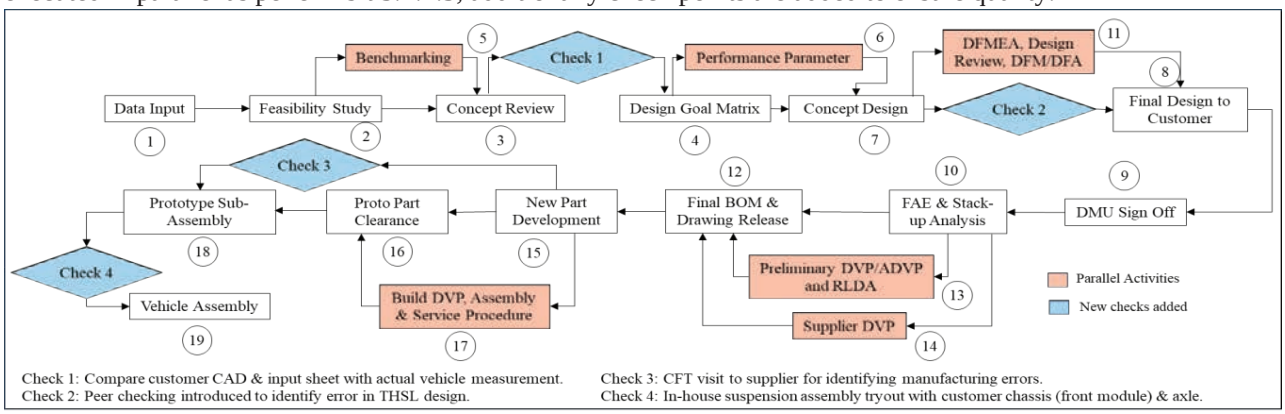


Exhibit 5.2.2.5 – NPD Process

5.2.2.6 NPD First Time Right: To measure First Time Right, % FTR = (Number of technical specifications meeting QC parameters in the first iteration/Total Number of QC parameter) *100) measurement methodology is identified. Quality parameters identified are combination of defects observed in zero kms, within 3 months of usage and 12 months of usages. Various new design standards and new test methods including field validations are developed for early detection of defects at design and validation stage. NPD process modified for first tie right approach as per exhibit 5.2.2.6. This has improved First Time Right KPI from 66% in FY21 to 92% in FY25.

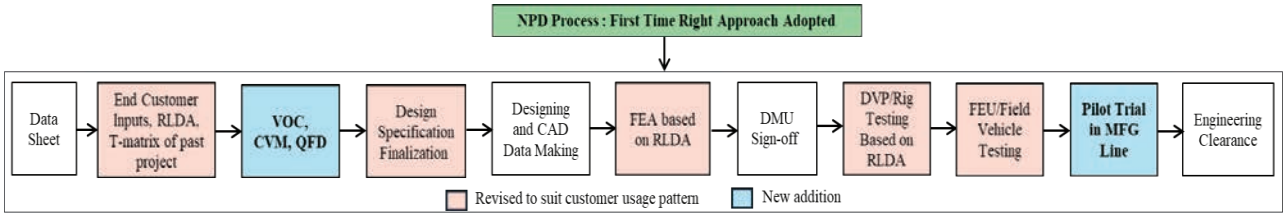


Exhibit 5.2.2.6 - NPD Process First time right approach

5.2.2.7 – Developing a robust field validation system based on end user application, boundary conditions and field RLDA analysis: For new applications and new customer programs, field validation is included as part of the NPD (New Product Development) process. To support the development of new suspension systems, the company operates a state-of-the-art Technical Centre in Pune, India, equipped to handle independent, end-to-end product development. This facility features advanced CAE and simulation tools, along with comprehensive testing capabilities at both the component and system levels. The validation process at THSL begins with a thorough understanding of real-world usage patterns (RWUP), captured using various sensors and Road Load Data Acquisition (RLDA) techniques. New CAE models and rig testing methods have been developed to replicate these RWUP conditions in a controlled lab environment. Continuous field failure monitoring helps assess the effectiveness of these validation methods, enabling ongoing process improvements to minimize defects in the market. Additionally, Total Quality Management (TQM) tools such as the T-matrix are employed to identify validation gaps and enhance overall testing capabilities.

5.2.3 Effect of the NPD Process: exhibits 5.2.3.1, 5.2.3.2, 5.2.3.3 & 5.2.3.4

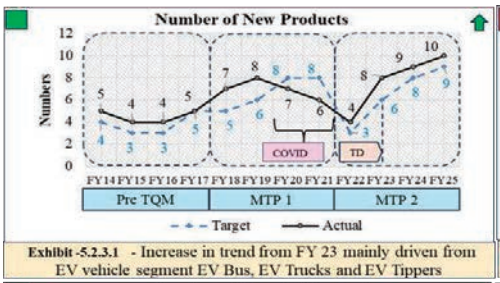


Exhibit -5.2.3.1 - Increase in trend from FY 23 mainly driven from EV vehicle segment EV Bus, EV Trucks and EV Tippers

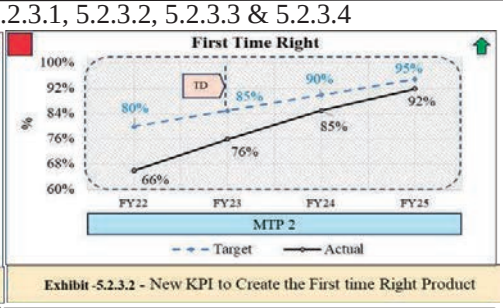


Exhibit -5.2.3.2 - New KPI to Create the First time Right Product

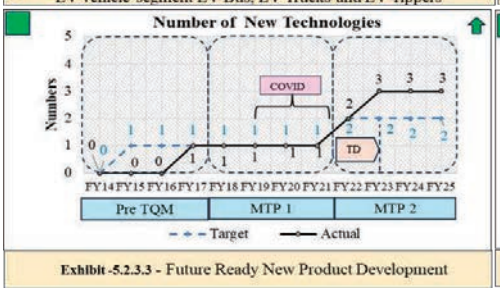


Exhibit -5.2.3.3 - Future Ready New Product Development

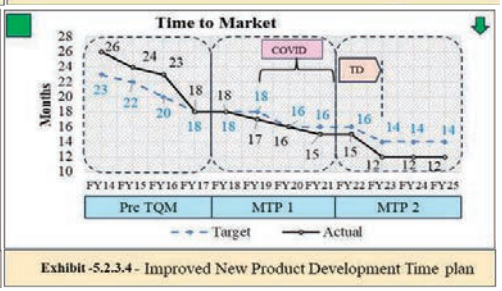


Exhibit -5.2.3.4 - Improved New Product Development Time plan

5.2.4Future Plan:

1. To strengthen program gate review system.

2. To strengthen technology integration in program review

3. Use of Artificial Intelligence and Machine Learning in NPD process

Chapter 5.3.: Base Building Strategy : Management of Cost (EBITDA Improvement)

THSL has identified opportunities of cost optimization in raw material through VA/VE, direct expenses and manpower efficiency using detailed cost tree analysis. The execution and progress monitoring are done using a CFM approach through EBITDA digital portal.

5.3.1 Background

To stay competitive, THSL agreed to price reductions with key customers. To maintain financial health, the company launched a structured **EBITDA Improvement Program** focused on cost management.

Key Highlights:

- **Employee-Led Initiatives:** Projects are identified via Kaizen, workshops, and suggestions. Improvements are tracked through an internal portal, and top Kaizens are rewarded.
- **Structured Deployment:**
  - **MTP1 (FY17-18):** Introduced the EBITDA Improvement Model and CFM approach. Projects were suggestion-driven.
  - **MTP2:** Enhanced with tree diagrams and levers (Exhibit 5.3.1.2) to tackle challenges like COVID-19, inflation, and customer price cuts.
- **Continuous Improvement:** The **PDCA cycle** drives cost control and ensures EBITDA targets are met.

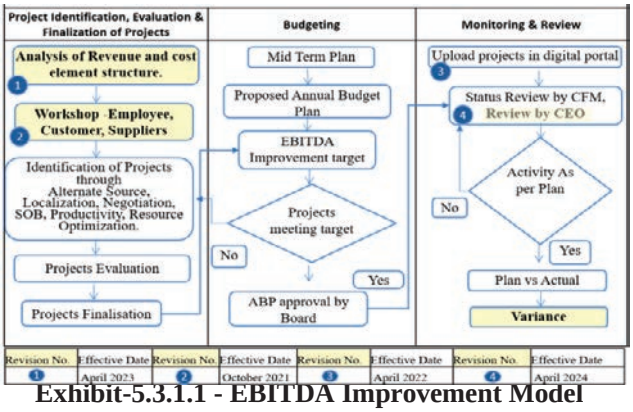


Exhibit-5.3.1.1 - EBITDA Improvement Model

Top Line Improvements	Direct & Variable Cost Reduction
• New product / customers / markets • Spare Parts Division & delivery price • Price increase from customer • Compensation from customer for cost increase • Compensation for obsolescence due to customer schedule changes.	• Packing Cost – by negotiation, use of Returnable pallets • Consumable – through negotiation, reduction the use of machine spare • Power & Fuel expenses by use of Solar energy • Sale of Wooden scrap, waste plastic, wooden garbage • Reduction in Logistics and Freight Costs : Rates, Utilization, Return charges, Localization • Improving Labor Efficiency, Reduction in Labor hours, cycle time reduction, Optimize Labor mix (Contract, Temporary, Assistant Trainees) • Reduction of Warranty expenses • Reduction in Maintenance costs
Raw Material Cost Savings	
• Use of Alternate Source • Share of Business • VAVE • Negotiation • Localization • Use of alternate material	

Exhibit-5.3.1.2 – EBITDA Improvement Levers

Summary of Focus Activities

Phase	MTP 1 FY 18-21	MTP 2 FY 22-25
Focus Activities	1. Introduced "EBITDA Improvement Program Model" specific for THSL needs. 2. Material cost reduction in major products through optimization, negotiations, alternate sourcing and localization of imported parts, Packing cost optimization.	3. VAVE projects identification and evaluation. 4. Logistic cost optimization project 5. Localization at JSR results in a reduction in logistics, raw material and operating cost. 6. Supplier negotiations and alternate sourcing. **7.** Analysis of loss-making parts.

Remaining problems	1. Erosion of margin because of price reductions in 26T Bogie. 2. Year on year an increase in logistic costs 3. VAVE projects not identified for Lift Axle.	1. EBITDA % to sales has not met the target in FY25 2. Warranty cost is higher than target in FY25. 3. Electricity costs have increased by 1.5 times

5.3.2 Detailed explanation of an EBITDA improvement project: Logistic Cost Optimisation (Project Timeline -May 2023 to Oct 2023)

1. Problem Definition

THSL was transporting FG and parts from Pune to JSR. In FY21 logistic cost increased by 0.8% (2.9% in FY20 to 3.7% in FY22 of sales) and targets were not met in FY21 to FY23. This is due to increase in fuel cost, inflation and other factors over the years which was not reimbursed by customers.

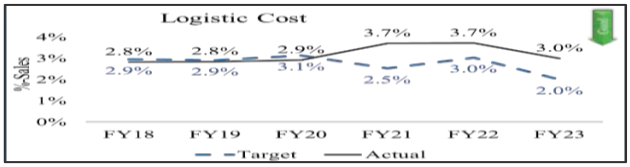


Exhibit-5.3.2.1 Logistic Cost

2. Observation

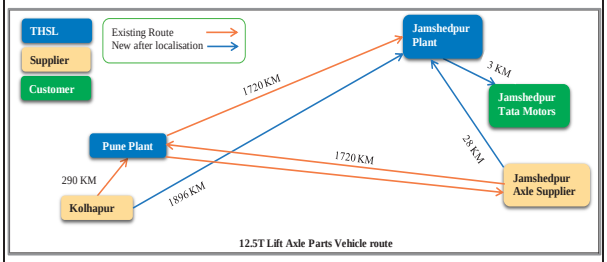


Exhibit-5.3.2.2 Route Optimisation through localization

3. Analysis

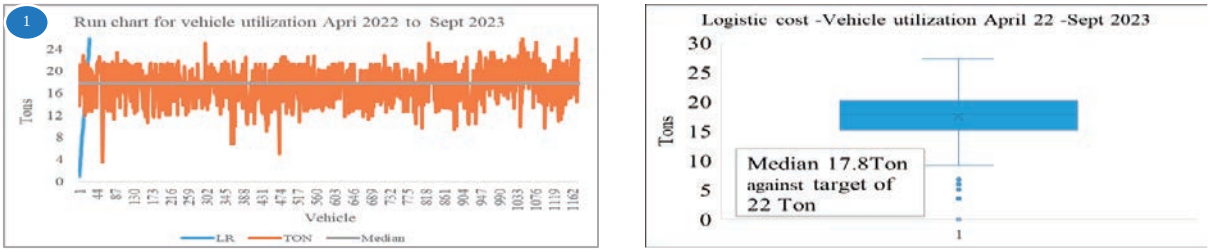


Exhibit-5.3.2.3 Run chart for Vehicle Utilisation

4. Action

Criteria	Vehicle Tonnage capacity utilization	Negotiation & Share of Business	Localisation at JSR	Parts packing optimisation	Contract for allowable of higer tonnage for all vehicle
Logistic cost reduction Potential	+	+	+	+	+
Time to Implement	+	+	0	+	-
Operational Impact	+	0	+	+	-
Scalability	+	+	+	0	-
Integration	0	+	+	0	-
Total Score	++++	++++	++++	+	-

1	**Improve vehicle utilisation** with double stacking by use of metallic pallets.
2	Freight rates **negotiation**.
3	**Localization of fabrication parts** at JSR

Sr. No.	PACKAGING METHOD	IMAGES	WEIGHT / TRAILOR	SAFETY DURING TRASNPORTATION	TRAILOR DRIVER RE-TIGHTENING ACTIVITY	COST SAVING AND PAYBACK	TIME FOR IMPLEMENTATION	PACKING ACTIVITY AT THSL	UNPACKING AT CUSTOMER END	TOTAL
		PRIORITY FACTO	9	10	8	8	9	8	8	
			CORELATION OF SOLUTION CRITERIA							
1	USAGE OF BOX PALLET		7	9	9	5	5	6	6	406
2	USAGE OF WOODEN PALLET WITH 8 TRAILING ARM IN ONE LAYER ON TRAILOR		5	6	5	8	9	7	7	402
3	USAGE OF WOODEN PALLET WITH 12 TRAILING ARM IN ONE LAYER ON TRAILOR		8	5	3	8	9	8	8	419
4	USAGE OF TWO WOODEN PALLET IN STACKED CONDITION		9	1	1	9	9	5	5	332
5	USAGE OF 7T LA EXISTING PALLET		9	9	8	9	8	8	8	507

5. Check

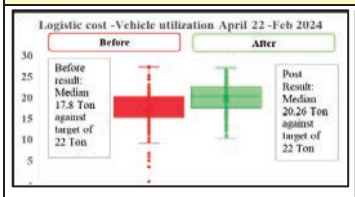
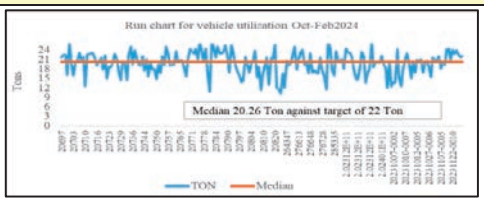


Exhibit-5.3.2.4 -Vehicle Utilization



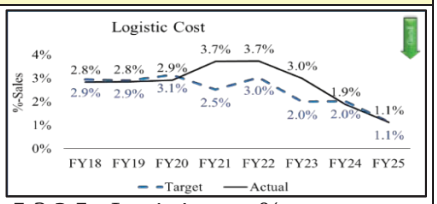


Exhibit-5.3.2.5 - Logistic cost %

6. Standardization

a) Work instruction updated
b) Horizontally deployed for all other products.

7. Conclusion

a) Savings in direct expenses and eliminated use of wood for packing material.
b) Reduction in Carbon footprint (CO2 Emission) due to lesser number of vehicles used.

Chapter 5.4: Base Building Strategy: Management of Digitization

5.4.1 Background:

THSL's digitization strategy aims to enhance user experience through improved data access, storage, security, and analysis. MTP1 focused on simple solutions; MTP2 expanded to complex projects.

5.4.2 MTP2 Focus:

Challenges (MTP2)	Focused Activity
Develop a Digital roadmap and Strategy based on digitization needs.	Create digital adoption roadmap and strategy
	Formulate a toolkit
	Create Prioritization process based on PQDCSME weightage

5.4.3 Digital Adoption Strategy:

MTP1 focused on quick wins using digitization tools for Kaizens, ideas, and near misses. MTP2 tackled complex projects like Warranty tracking and MIS uniformity, while MTP3 will target Industry 4.0, AI, and ML.

5.4.4 Toolkit Formulation

Created a toolkit aligned with corporate vision using best practices and examples. Training provided on Power Automate, Power BI, and SharePoint.

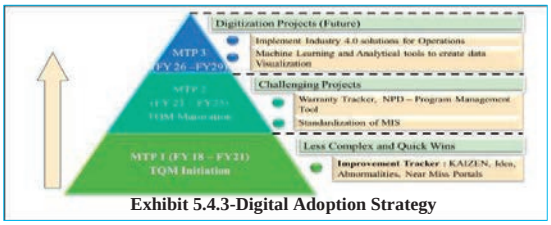


Exhibit 5.4.3-Digital Adoption Strategy

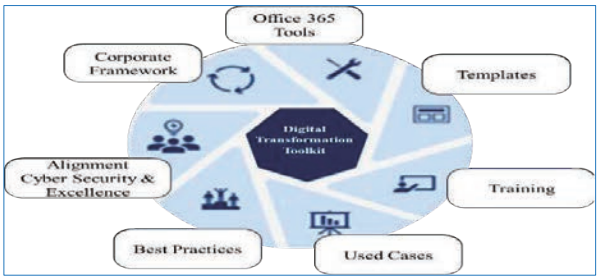


Exhibit 5.4.4-Formulation of Toolkit

5.4.5 Defined Priorities

Projects identified via PQDSME survey and ranked using Priority Matrix. High-impact projects selected from quadrant analysis. (Refer exhibit no. 5.4.5.1)

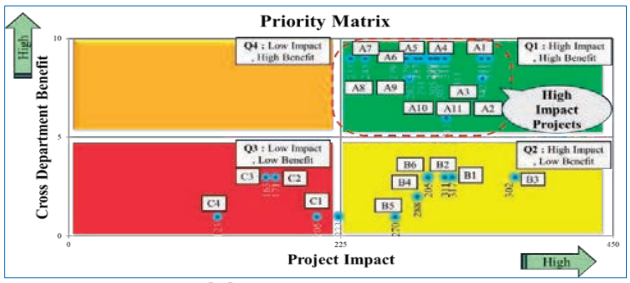


Exhibit 5.4.5.-Priority Matrix

5.4.6 Project Execution:

Process of execution got standardized and progress tracker with milestones was established.

5.4.7 Achievements

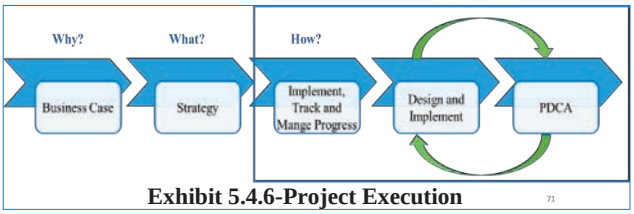


Exhibit 5.4.6-Project Execution

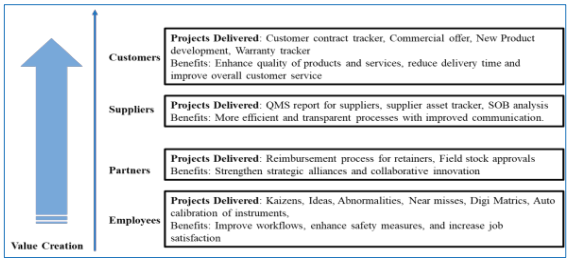


Exhibit 5.4.7 – Project achievements

Srl#	Projects	Productivity	Quality	Cost Savings	Delivery	Simplicity	Moral	Environment	Total
A1	Warranty Tracker System	9	9	3	9	9	9	1	353
A2	IMPACT - Uniformity of	9	9	9	9	3	3	1	347
B1	SOB Analytics	9	3	9	9	1	9	1	305
B2	Barcode Label Printing on shop	9	9	1	3	1	9	1	227
B3	Automate reminder for Supplier rating	3	9						

Exhibit 5.4.5.1-Define Ranking for Prioritization

Multiple projects for different stakeholders were executed with specified benefits. We could deliver multiple projects on time with respect to plan.

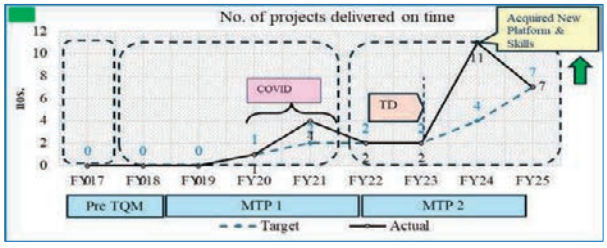


Exhibit 5.4.8.1-Effective KPI No. of projects

5.4.8 Effects: All of the projects approved by BU were delivered on time**.** (Refer exhibit no. 5.4.8.1)

5.4.9 Future Plans: MTP3 will focus on machine connectivity for real time data which will be integrated with MES and AI will be used for Advanced Analytics

5.5. Base Building Strategy: Employee Capability Building

5.5.1. Background: THSL, a technology-driven organization, emphasizes continuous enhancement of employees' skills and competencies to align with business goals. To strengthen this, THSL redesigned the training need identification process and developed a comprehensive capability matrix integrating customer requirements, job descriptions, PMS results, competency gap analysis, and training effectiveness evaluation.

5.5.2. Key Focused Activities (MTP FY22-FY25):

Capability Building CFM objectives for MTP FY22-FY25 are Building employees' capability of staff & operator. Building Leadership Pipeline through 9 box talent management model.

Focus Area	Improvements Done	Results Achieved
Employee Capability Building	Redesigned training process with structured competency-based framework. Introduced 'Gurukul' skill enhancement program for operators and trainees.	Training coverage improved to 97% Skill level (S4) increased from 0% to 22%.
Leadership Pipeline Development	Implemented 9-Box Talent Management Model assessing D2+ employees on Ability, Agility, Aspiration.	(Top 3 Boxes) improved from 45% in FY22 to 53% by FY24
Process & Frameworks	Developed competency framework and capability matrix for staff. Introduced 4-level training effectiveness model using tests and feedback.	The Base Building Strategy transformed THSL's capability development into a structured, outcome-based model—enhancing workforce skills, leadership depth, and readiness for future growth

5.5.3 Major progress (Detailed Explanation) of focused activities:

5.5.3.A1: Redesigned Training Process in MTP 2 for a detailed employee capability building.

The training need was focused on organization & compliance training and we used to only capture the overall training man-days and coverage of employees was challenge with defined competency and training matrix and a structured training process the coverage was increased with enhancement in competency (Exhibit 5.5.3.A1).

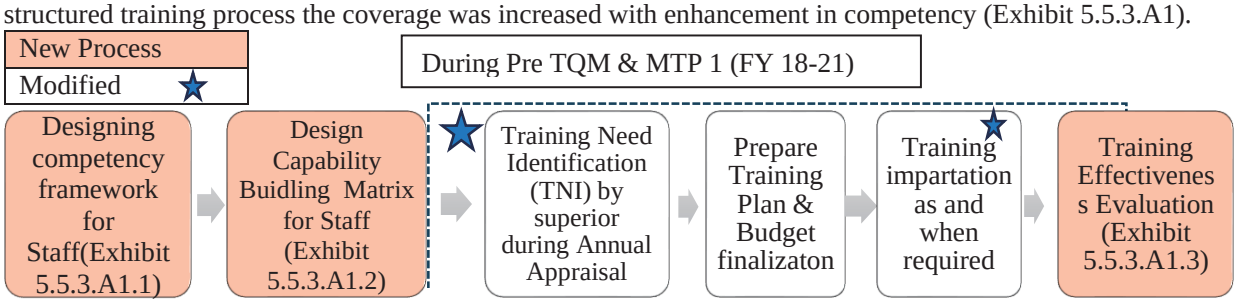


Exhibit 5.5.3. A1 - Redesigned Training Process at THSL in MTP 2 (FY 22-25)

5.5.3.A1.1: Designing competency framework for Staff:

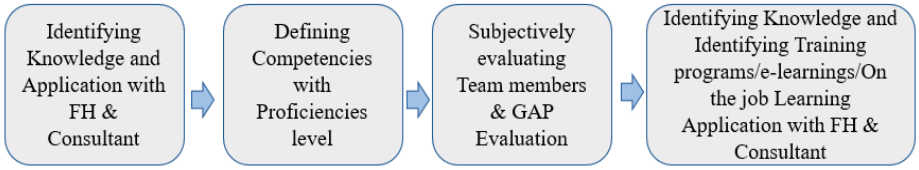
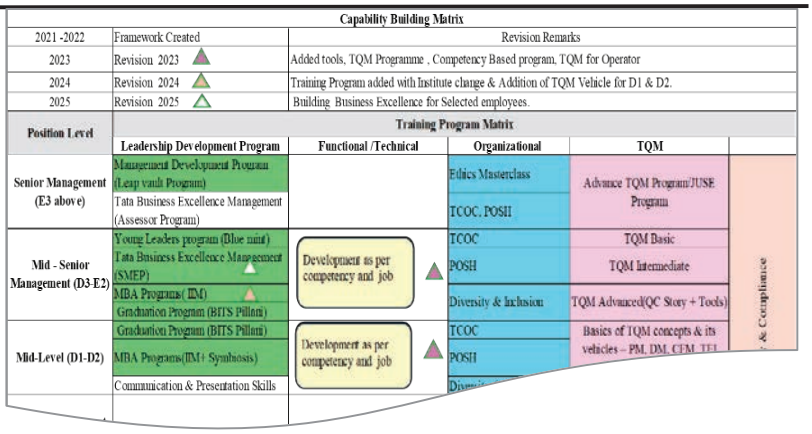


Exhibit 5.5.3.A1.1 – Competency Development Framework for Staff

Designed & developed the competency framework with detailed competency for each role. Assessment of each individual and function against the competency dictionary of required current & future skill/competency was completed 100% for Staff & company wide overall competency availability was derived for further development. (Exhibit 5.5.3.A1.1).

5.5.3.A1.2: Design Capability Building Matrix for Staff: Based on the TQM Diagnosis feedback in FY 22, THSL further created a framework for building the target capabilities at each level and function. By using this matrix, training program for each position has been clear and capabilities being targeted through training has been clarified. (Exhibit 5.5.3.A1.2).

5.5.3.A1.3: Training Effectiveness Model: After imparting the training, the effectiveness is also checked by taking learning tests & manager assessments for certain functional workshops to measure individual learning and also the feedback at the end of training from the participants. To evaluate the training effectiveness THSL has designed an effectiveness model of 4 level.



Capability Building Matrix		
2021 -2022	Framework Created	Revision Remarks
2023	Revision 2023	Added tools, TQM Programme , Competency Based program, TQM for Operator
2024	Revision 2024	Training Program added with Institute change & Addition of TQM Vehicle for D1 & D2.
2025	Revision 2025	Building Business Excellence for Selected employees.

Position Level	Training Program Matrix			
	Leadership Development Program	Functional /Technical	Organizational	TQM
Senior Management (E3 above)	Management Development Program (Leap vault Program)		Ethics Masterclass	Advance TQM Program/JUSE Program
	Tata Business Excellence Management (Assessor Program)		TCOC, POSH	
Mid - Senior Management (D3-E2)	Young Leaders program (Blue mint)	Development as per competency and job	TCOC	TQM Basic
	Tata Business Excellence Management (SMEP)		POSH	TQM Intermediate
	MBA Programs(IIM)		Diversity & Inclusion	TQM Advanced(QC Story + Tools)
	Graduation Program (BITS Pillani)			
Mid-Level (D1-D2)	Graduation Program (BITS Pillani)	Development as per competency and job	TCOC	Basics of TQM concepts & its vehicles – PM, DM, CFM, TFI
	MBA Programs(IIM+ Symbiosis)		POSH	
	Communication & Presentation Skills			

Exhibit 5.5.3A1.2 – Capability Building Matrix for Staff

5.5.3.1.2: Introduced Skill enhancement process for trainees - Gurukul - Structured training to improve the skilled level of Operator & Trainees: THSL provided only on-the-job training (OJT) for a specific process to trainees. As a result, trainees acquired only limited knowledge, which did not contribute significantly to skill enhancement. To address this gap, we developed a comprehensive training framework aimed to enhance the skill levels of operators, under the Gurukul program (Exhibit 5.5.3.1.2).

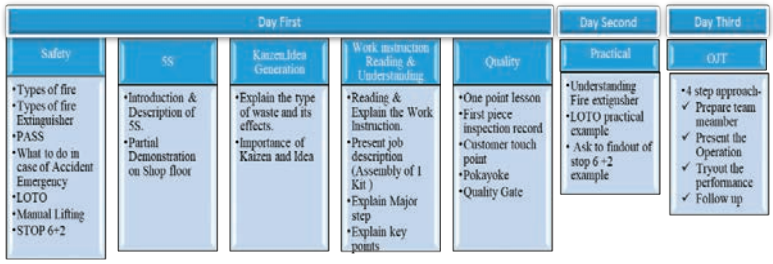


Exhibit 5.5.3.1.2– Skill Enhancement Process

5.5.3.2: Building leadership pipeline through 9-Box talent management model:
In order to build robust leadership pipeline, THSL developed "9-Box talent management model" All employees D2 and above of THSL is assessed against performance & potential by senior leadership and are plotted in the 9 Box grid 3A -ability, agility and aspiration is assessed for identifying the potential. Hi Pot (Top 3 Boxes) improved from 45% in FY22 to 53% by FY24.

Chapter 6: Overall Effects

6.1 Business focus area:

6.1.1 Tangible effects:

6.1.1.1 Safety:

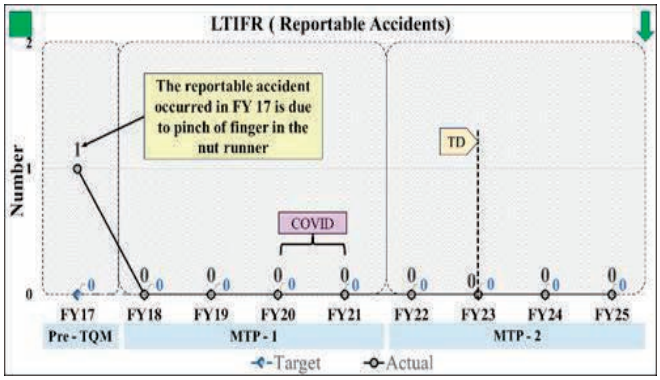


Exhibit 6.1.1.1.1 - Except FY 17 the LTIFR (reportable accidents) are zero.

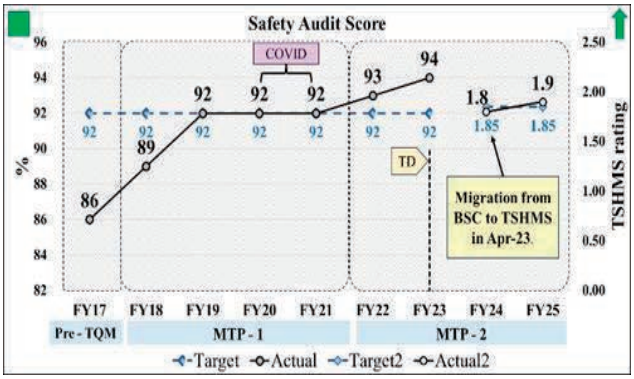


Exhibit 6.1.1.1.2 - THSL has migrated from BSC to TSHMS in FY 24 improving the assessment score.

6.1.1.2 Exceed customer expectations:

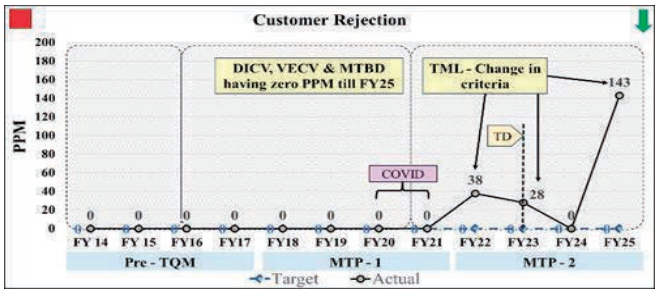


Exhibit 6.1.1.2.1 - Zero customer rejection for DICV/VECV/MTBD except for TML, action plan initiated to strengthen customer touchpoint detection and prevention controls in line with revised criteria.

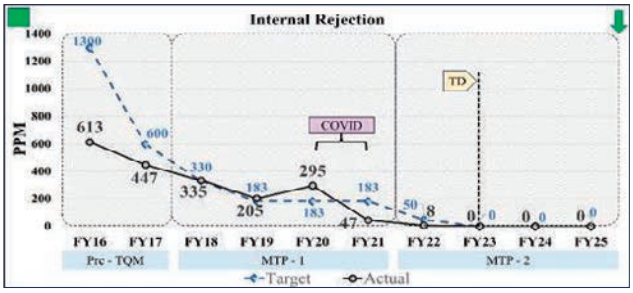


Exhibit 6.1.1.2.2 - THSL consistently achieved inhouse rejection target due to improvement in Lift Axle and Bogie suspension assembly processes.

6.1.1.3 Business growth: Grow with TML & Grow beyond TML:

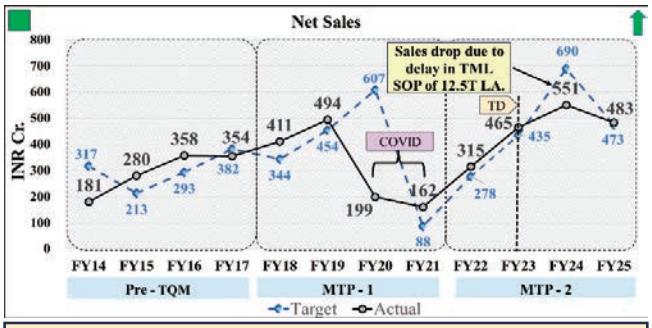


Exhibit 6.1.1.3.1 - Overall net sales grew at 2X CAGR- 31% vs. 15% Industry CAGR.

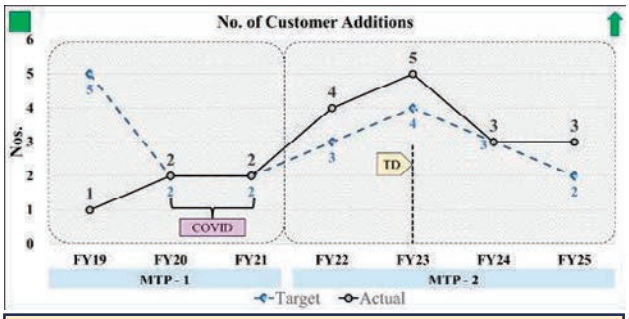


Exhibit 6.1.1.3.2 - 15 New customers added during MTP2 for 12.5T Lift axle, Bogie, and Bus suspension products.

6.1.1.4 Achieving compelling value to stake holders:

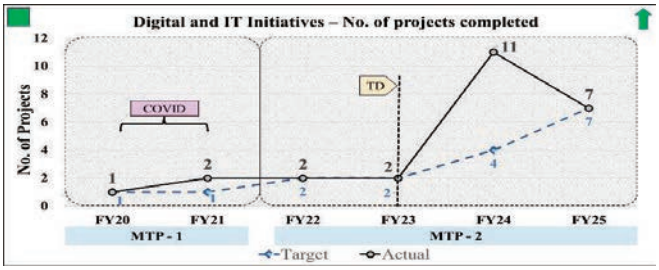


Exhibit 6.1.1.4.1 - Digital & IT initiatives target met during MTP2 in line with THSL digital roadmap.

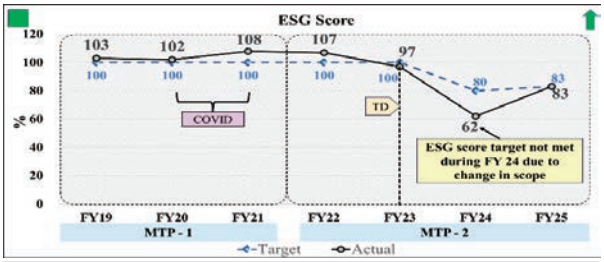


Exhibit 6.1.1.4.2 - Overall ESG score target met during MTP2 except FY 24 due to change in assessment scope.

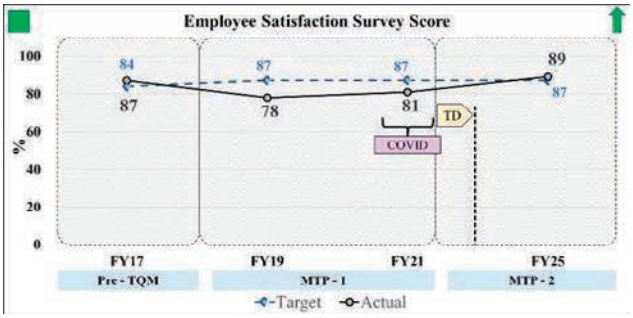


Exhibit 6.1.1.4.3 - Employee satisfaction score in MTP2 increased due to structured employee engagement programs & targeted actions on low scoring pillars from the last survey.

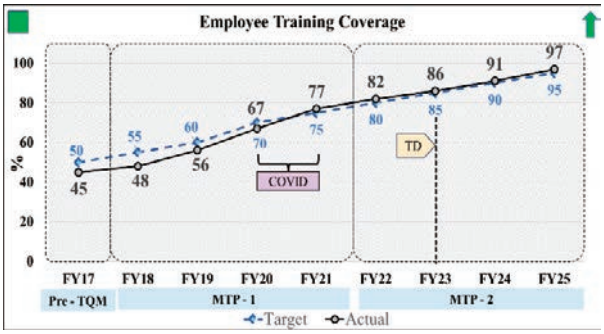


Exhibit 6.1.1.4.4 - Employee training coverage improved during MTP2 through targeted competency development programs and strict adherence to the training calendar.

6.1.2 Intangible effects:

- Enhanced strategy development and execution through policy management.
- Enhanced quality culture and knowledge on TQM tools and vehicles.
- Increased employee engagement & morale.
- Strengthened customer & supplier relationship due to data driven problem solving and decision making.
- Improved coordination and teamwork through CFM in quality, cost and operations management.

6.1.3. Organizational Capabilities Acquired:

- Enhanced systematic problem-solving and data driven decision making capabilities using statistical tools.
- THSL has significantly enhanced and developed new capabilities in planning, budgeting and executing infrastructure projects.

These intangible benefits and capabilities have enabled THSL to win multiple accolades from customers and industry.

Chapter 7: Future Plan

7.1. Introduction: At THSL, TQM has been the foundation of our continuous improvement journey, enabling us towards customer satisfaction , operational excellence, and sustanable growth . However, our journey does not stop here. As we move beyond the Deming Prize and aim for the Deming Grand Prize in FY29, we recognize that our TQM journey must further evolve to meet future challenges in a rapidly changing CV industry. As we scale our business in MTP3 (FY26 -FY 29) to achieve our FY 29 vision , TQM will continue to be the key enabler in achieving following key business objectives:

Key Business Objectives	Future Plan (FY26-FY29)
Customer Quality Transformation	• Customer Satisfaction Score improvement > 90. • Breakthrough Improvements in 12.5T Lift Axle IPTV <10.
Sustainable Business Growth(1700 cr in FY29)	• Market leadership in EV Bus and Truck suspensions with Top 5 OEMs. • Expansion of Bogie/Bogie component business with Top 3 Defence OEMs and Top 2 CV OEMs. • Growth of ARB exports to EU-Achieve market leadership in EU.
New Technology /Product	• Independent front suspension for 12m EV bus. • Welded Stabilizer. • 4 Bag air suspension for EV bus. • Air suspension with ZMD (Zero Maintenance Damper).
Supplier Quality Transformation (SPPM<100)	• Implementing Supplier Development Program (SDP)through TQM to achieve quality consistency. • Strengthening supplier PPA process for defect-free components.
Employee Capability Development	• Total Employee Involvement score to improve to 100% • ARB – Engineering, testing and business development skills • Market intelligence and forecasting skills enhancement-multi-channel intelligence data and AI tools.
Sustainability (ESG)	• ESG score > 90% . • Investment in energy-efficient manufacturing technologies (Solar, LED, Energy efficient furnaces & compressors) and real-time energy monitoring systems to reduce energy intensity and improve efficiency • Conduct Life Cycle Assessments (LCA) to improve product sustainability.
Digitalization	• Digitalization of TQM vehicles across all business functions • Shopfloor digitalization- Industry 4.0/MES for ARB and Suspension assembly.

7.2. Future plans for TQM practice at THSL: THSL will continue to strengthen its TQM practices through a structured and future-focused approach to achieve excellence in TQM vehicles across all business functions. Following activites are planned ,

- Reinforce policy management by integrating insights from VOC, PESTEL, SWOT, and FSM analysis into the annual business planning framework through PDCA approach.
- Digitalization of TQM vehicles across all business functions.

- Conduct advanced TQM training for leadership and cross-functional teams to strengthen problem-solving capabilities.
- Strengthening employee engagement through Kaizen, QC Circles, and cross-functional team collaborations to promote “Total Employee Involvement “
- Benchmark against Deming Grand Prize winners and implement best practices across all functions. Conduct annual TQM self-assessments and external audits to measure progress toward Deming Grand readiness.
- Deploy TQM practices with THSL supply chain to achieve sustainable quality of components.

２０２５年度

デミング賞委員会　事務報告

デミング賞委員会事務報告

デミング賞委員会

2025年度デミング賞委員会は1月1日付で委員，顧問のご委嘱を申し上げ，その活動は1月21日の第1回デミング賞委員会の開催から始まりました．委員会の業務として，規定に従って運営委員会と3つの各委員会のもとそれぞれの委員会活動が行われました．

また，デミング賞各賞候補者の推薦・応募を広くもとめ，これに基づいて各賞の選考が行われました．その結果，主要業務は本日の受賞報告講演会，授賞式をもって終了いたします．この間の委員，顧問各位のご尽力ならびに日本経済新聞社をはじめ各方面から寄せられました絶大なるご協力に対しまして深く感謝申し上げます．

以下，2025年度デミング賞委員会の事務報告を申し上げます．

1．委員会の構成

⑴ 2025年1月1日十倉委員長から，委員88名，顧問120名をご委嘱いたしました．

委員長は一般社団法人日本経済団体連合会 会長 十倉雅和が，副委員長は旭化成株式会社 取締役会長／一般財団法人日本科学技術連盟 会長 小堀秀毅が，セクレタリーは一般財団法人日本科学技術連盟 顧問 中島宣彦が，それぞれ務めることになりました．

その後，十倉委員長は5月31日付で任期満了となり委員長を退任いたしました．後任には現一般社団法人日本経済団体連合会 会長 筒井義信が就任いたしました．

なお，委員，顧問に異動がありましたので，11月1日現在の名簿を次に掲げます．

2025年度デミング賞委員会名簿

※ 2025 年度は，・1999 年以後のデミング賞受賞組織に顧問と委員を委嘱
・1998 年以前のデミング賞受賞組織に顧問を委嘱
・デミング賞大賞（旧：日本品質管理賞）受賞組織に顧問と委員を委嘱
しております．

（敬称略，2025 年 11 月 1 日現在）

委員長	筒井義信	一般社団法人日本経済団体連合会 会長
副委員長	小堀秀毅	一般社団法人日本経済団体連合会 副会長
		一般財団法人日本科学技術連盟 会長
セクレタリー	中島宣彦	一般財団法人日本科学技術連盟 顧問

委員（受賞組織関係者，組織名五十音順）

委員	石井　浩	アート金属工業株式会社　取締役
〃	松井克行	株式会社アイシン　グループ品質本部 本部長
〃	吉井克成	アイシン軽金属株式会社　執行幹部
〃	藤本　泰	アイシンシロキ株式会社　Executive Advisor
〃	樋口義晴	アイシン高丘株式会社　執行幹部
〃	磯村直輝	アイホン株式会社　執行役員 管理本部長
〃	福村文雄	株式会社麻生　飯塚病院　特任副院長
〃	浅井竜二	株式会社アドヴィックス　執行役員
〃	田邊嘉之	エクシオ・デジタルソリューションズ株式会社　ECI カンパニー　経営管理部 部長
〃	郡田裕生	株式会社ＭＣシステムズ　技術部 部長
〃	加藤広樹	株式会社オティックス　経営管理本部 本部長
〃	中牟田　慶	株式会社キャタラー　執行幹部 コーポレート戦略本部 本部長
〃	山下千津子	株式会社小松製作所　コマツウェイ総合研修センタ　所長
〃	西山雄一郎	株式会社コロナ　品質保証部 次長
〃	上原新吾	サンデン株式会社　品質本部 本部長
〃	山本雄三	株式会社ＧＳユアサ　産業電池電源事業部 品質保証本部 TQM 推進部 部長
〃	岩佐伸勝	株式会社ジーシー　GQM 推進室 室長
〃	山﨑章二	株式会社ジーシーデンタルプロダクツ　代表取締役社長
〃	岡村隆広	株式会社セキソー　製造部 部長
〃	下川勝久	DMG 森精機株式会社　専務執行役員
〃	村島末広	ダイヤモンド電子株式会社　工場長
〃	奥田正直	株式会社竹中工務店　専務執行役員
〃	宮本眞志	トヨタ自動車株式会社　カスタマーファースト推進本部 本部長
〃	宮嵜義弘	トヨタ自動車九州株式会社　直轄 CPL
〃	伊藤正章	トヨタ車体株式会社　取締役・執行役員

委員　鴨　下　泰　明　トヨタ紡織株式会社　第1工場統括 刈谷工場 工場長
〃　佐　藤　仁　紀　トヨタホーム株式会社　取締役常務執行役員
〃　鈴　木　隆　昌　日本製鉄株式会社　品質保証部長
〃　岡　田　浩　二　日本電気株式会社　環境・品質統括部 シニアディレクター
〃　塩　谷　泰　司　豊生ブレーキ工業株式会社　取締役
〃　中　村　一　彦　前田建設工業株式会社　総合監査部 安全・品質・環境監査グループ グループ長
〃　村　井　友　成　丸和電子化学株式会社　取締役
〃　栄　永　昌　幸　株式会社メイドー　顧問
〃　茨　木　信　彦　名北工業株式会社　技術顧問

（34名）

委員（学識経験者等，氏名五十音順）

委員	朝日　弘	一般財団法人日本規格協会　理事長
〃	荒木孝治	関西大学名誉教授
〃	安藤之裕	一般財団法人日本科学技術連盟　国際事業参与
〃	飯塚悦功	東京大学名誉教授
〃	池谷智明	一般財団法人日本科学技術連盟　嘱託
〃	石津昌平	青山学院大学名誉教授
〃	泉井一浩	京都大学　教授
〃	岩崎日出男	近畿大学名誉教授
〃	圓川隆夫	東京工業大学名誉教授，職業能力開発総合大学校名誉教授
〃	太田雅晴	大阪市立大学名誉教授，大阪学院大学　教授
〃	大友政人	元アート金属工業株式会社　元取締役
〃	大沼邦彦	ビークルエナジージャパン株式会社　社外講師
〃	小笠原浩	株式会社安川電機　代表取締役会長
〃	奥原正夫	一般財団法人日本科学技術連盟　技術顧問
〃	長田洋	東京工業大学名誉教授
〃	小原好一	前田建設工業株式会社　社友
〃	梶原千里	静岡大学　准教授
〃	金子雅明	東海大学　教授
〃	木内正光	玉川大学　教授
〃	鬼頭靖	一般財団法人日本科学技術連盟　嘱託
〃	今野勤	マネジメントモデル研究所　所長
〃	榊秀之	関西福祉科学大学　教授
〃	佐々木眞一	一般財団法人日本科学技術連盟　理事長
〃	佐野雅隆	拓殖大学　教授
〃	鈴木和幸	電気通信大学名誉教授，特任教授
〃	鈴木知道	東京理科大学　教授
〃	鈴木直人	一般財団法人日本科学技術連盟　嘱託
〃	鈴木秀男	慶應義塾大学　教授
〃	鈴木浩佳	トヨタ自動車株式会社　モノづくり開発統括部 戦略 G 主査
〃	高倉宏	トヨタ自動車九州株式会社　TQM 推進室主査
〃	髙橋勝彦	広島大学　客員教授・名誉教授
〃	椿広計	データサイエンス共同利用基盤施設　副施設長
〃	永井一志	玉川大学　教授
〃	中尾眞	株式会社ジーシー　最高顧問
〃	中島健一	早稲田大学　教授
〃	中條武志	中央大学　教授
〃	永田靖	早稲田大学　教授
〃	長塚豪己	中央大学　教授
〃	西敏明	岡山商科大学　教授
〃	藤井一明	株式会社日本経済新聞社　常務取締役
〃	古谷健夫	株式会社クオリティ・クリエイション　代表取締役
〃	丸山一彦	和光大学　教授
〃	水町浩之	Amico & Troperiou　代表
〃	棟近雅彦	早稲田大学　教授
〃	村上啓介	関西大学　教授
〃	森田浩	大阪大学　教授
〃	山田秀	慶應義塾大学　教授
〃	山本涉	慶應義塾大学　教授
〃	米岡俊郎	株式会社 P&Q コンサルティング　代表取締役
〃	和田雅宏	職業能力開発総合大学校　教授
〃	渡辺喜道	山梨大学　教授

（51 名）

顧問（組織名五十音順）

顧問	三城伸五	アート金属工業株式会社　代表取締役社長
〃	高橋新一	株式会社アーレスティ　代表取締役社長
〃	長谷川恭之	株式会社ＩＨＩ　資源・エネルギー・環境事業領域 理事・原子力 SBU 長
〃	野村得之	愛三工業株式会社　取締役社長
〃	吉田守孝	株式会社アイシン　取締役社長
〃	竹本和雄	アイシン機工株式会社　取締役社長
〃	古村清志	アイシン軽金属株式会社　取締役社長
〃	田中俊夫	アイシンシロキ株式会社　代表取締役社長
〃	鈴木文彦	アイシン辰栄株式会社　取締役社長
〃	安藤英明	アイシン新和株式会社　取締役社長
〃	奥田誠	アイシン高丘株式会社　取締役社長
〃	立松敬朗	株式会社アイシン福井　取締役社長
〃	後藤尚英	愛知製鋼株式会社　代表取締役社長
〃	市川周作	アイホン株式会社　代表取締役会長
〃	小堀秀毅	旭化成株式会社　取締役会長
〃	本村健太	株式会社麻生　飯塚病院　院長
〃	秋山晃	株式会社アドヴィックス　取締役社長
〃	国谷一彦	株式会社安藤・間　代表取締役社長
〃	中筋英樹	株式会社イトーキ　品質保証本部 本部長
〃	矢野文雄	内野建設株式会社　代表取締役
〃	町田敏之	エクシオ・デジタルソリューションズ株式会社　ECI カンパニー　社長
〃	羽下修	ＮＥＣプラットフォームズ株式会社　執行役員
〃	内藤大介	エヌティーテクノ株式会社　代表取締役社長
〃	田中秀彦	株式会社ＮＴＴデータグループ　執行役員 技術革新統括本部長
〃	佐藤恭司	株式会社ＭＣシステムズ　社長執行役員
〃	加來正年	王子ホールディングス株式会社　代表取締役会長
〃	小田井勇樹	株式会社オティックス　代表取締役社長
〃	菅原公一	株式会社カネカ　代表取締役会長
〃	杉岡伸一	カヤバ株式会社　常務執行役員・品質本部長
〃	森望	関西電力株式会社　取締役代表執行役社長
〃	石田雅資	株式会社キャタラー　代表取締役社長
〃	石井康彦	京三電機株式会社　取締役社長
〃	山口真輝	株式会社共和工業所　代表取締役社長
〃	角岡達夫	株式会社コーリツ　代表取締役会長
〃	小島栄二	小島プレス工業株式会社　取締役社長
〃	大幸利充	コニカミノルタ株式会社　取締役 代表執行役社長 兼 CEO
〃	小川啓之	株式会社小松製作所　代表取締役社長 兼 CEO
〃	塚本健太	コマニー株式会社　代表取締役 社長執行役員
〃	大桃満	株式会社コロナ　代表取締役社長
〃	大西義典	埼玉機器株式会社　代表取締役社長
〃	大月孝宏	サンデン株式会社　総務本部 本部長
〃	西海栄一	三輪精機株式会社　代表取締役社長
〃	植中良成	株式会社ＧＳユアサ　品質統括部 部長
〃	中川昌之	株式会社ジーシー　取締役 常務執行役員 兼 CFO
〃	広瀬政之	ＪＦＥスチール株式会社　代表取締役社長
〃	近藤禎人	株式会社ジェイテクト　取締役社長
〃	井上和幸	清水建設株式会社　代表取締役 社長
〃	佐藤朋由	ジヤトコ株式会社　代表取締役社長 兼 CEO
〃	関根一志	常磐興産株式会社　代表取締役社長

顧問	秋谷文男	信越化学工業株式会社　代表取締役会議長
〃	北山修二	神鋼鋼線工業株式会社　代表取締役社長
〃	井上治	住友電気工業株式会社　社長
〃	髙下貞二	積水化学工業株式会社　代表取締役会長
〃	山田昌也	株式会社セキソー　取締役社長
〃	森雅彦	DMG 森精機株式会社　代表取締役社長
〃	田尻哲也	株式会社ダイヘン　代表取締役会長
〃	小野有理	ダイヤモンドエレクトリックホールディングス株式会社　代表取締役社長 CEO
〃	芦谷三郎	ダイヤモンド電子株式会社　代表取締役会長 兼 社長
〃	佐々木正人	株式会社竹中工務店　取締役執行役員社長
〃	武部一顯	株式会社武部鉄工所　代表取締役社長
〃	辻村明広	田辺三菱製薬株式会社　代表取締役
〃	本多圭介	中越合金鋳工株式会社　代表取締役副社長
〃	神津直	中国化薬株式会社　代表取締役 社長
〃	林新之助	株式会社デンソー　代表取締役社長
〃	鶴田真徳	株式会社デンソーエレクトロニクス　取締役社長
〃	鶴見典和	東海化成工業株式会社　代表取締役社長
〃	二之夕裕美	株式会社東海理化　代表取締役社長　社長執行役員
〃	島田太郎	株式会社東芝　代表取締役 社長執行役員 CEO
〃	田村信也	ＴＯＴＯ株式会社　代表取締役社長執行役員
〃	野口信吾	東洋ガラス株式会社　代表取締役社長
〃	大塚穣	東陽精機株式会社　代表取締役社長
〃	畑慎一郎	東レ株式会社　上席執行役員 品質保証本部長
〃	安田洋	豊田合成株式会社　取締役副社長
〃	豊田章男	トヨタ自動車株式会社　取締役会長
〃	長木哲朗	トヨタ自動車九州株式会社　代表取締役 取締役社長
〃	石川洋之	トヨタ自動車東日本株式会社　取締役 社長
〃	松尾勝博	トヨタ車体株式会社　代表取締役社長
〃	榊原正己	トヨタ紡織株式会社　生産技術本部　生技開発領域　領域長 兼 工機部 部長
〃	後藤裕司	トヨタホーム株式会社　取締役
〃	伊藤浩一	株式会社豊田自動織機　代表取締役社長
〃	川村茂之	日本化薬株式会社　代表取締役社長
〃	長谷部剛	株式会社日本経済新聞社　代表取締役社長
〃	松尾敏夫	株式会社日本製鋼所　代表取締役社長
〃	今井正	日本製鉄株式会社　代表取締役社長
〃	阿賀英司	日本曹達株式会社　代表取締役社長
〃	芳村隆弘	日本テキサス・インスツルメンツ合同会社　生産本部長 兼 美浦工場長
〃	遠藤信博	日本電気株式会社　特別顧問
〃	厚母尚俊	パナソニックインダストリー株式会社　品質センター 品質企画部 部長
〃	加藤之弘	浜名湖電装株式会社　取締役社長
〃	大石晃裕	株式会社日立製作所　専門理事 品質保証統括本部 統括本部長
〃	小木曽聡	日野自動車株式会社　代表取締役社長・CEO
〃	黒澤勉	株式会社不二越　代表取締役 社長執行役員
〃	福永満	富士フイルムビジネスイノベーション株式会社　全社開発機能統括，品質保証 管掌 執行役員
〃	高田勝	フジミ工研株式会社　代表取締役社長
〃	石橋秀一	株式会社ブリヂストン　取締役 代表執行役 Global CEO
〃	森平英也	古河電気工業株式会社　代表取締役社長
〃	伊藤良成	豊生ブレーキ工業株式会社　取締役社長
〃	加藤伸夫	北陸工業株式会社　代表取締役社長

顧問	前田操治	前田建設工業株式会社　代表取締役社長
〃	塩入正章	株式会社前田製作所　代表取締役
〃	蟹井賢治	丸和電子化学株式会社　取締役社長
〃	藤井　司	マレリ株式会社　代表取締役社長
〃	中井良和	三菱電機株式会社　常務執行役 CPO, CQO
〃	長谷川裕恭	株式会社メイドー　代表取締役会長
〃	福西康和	名北工業株式会社　代表取締役社長
〃	大塚丈徳	株式会社安川電機　執行役員 品質サービス本部長
〃	山岡健人	ヤンマーホールディングス株式会社　代表取締役会長 兼 代表取締役社長
〃	谷　典幸	株式会社ユニバンス　取締役 副会長
〃	江山創一	理研鍛造株式会社　代表取締役 社長
〃	中田克典	株式会社リコー　コーポレート専務執行役員 RICOH Digital Products BU プレジデント
〃	片岡　健	ルネサスエレクトロニクス株式会社　執行役員
〃	飛戸正己	株式会社レゾナック・ホールディングス　執行役員 CMEO/CQO

（112 名）

顧問（海外受賞組織関係者，組織名アルファベット順）

顧問	C Thomas Mathew	Unit Head Apollo Tyres Limited, Chennai Plant
〃	Mirza Asif Beg	Senior executive Director Supply Chain management, Quality assurance and Chief - TQM Directorate Asahi India glass Limited
〃	Nagarajan E	Pantnagar Plant/ Hosur Unit Ⅱ Head- Operation Strategy & Business Excellence Ashok Leyland Limited Pantnagar Plant
〃	Charoen Ruengwilai	President Bangkok Komatsu Company Limited
〃	K. Suryaprakash	Executive Director, Foundry Division Brakes India Private Limited
〃	Masataka Nakamura	Vice President Cataler North America Corporation
〃	Shingo Sakagami	Chairman of the Board, General Manager Cataler (Wuxi) Automotive Environment Technology Company Limited
〃	Jignesh Sharda	Vice President QA, Sustainability and QBM CEAT Limited
〃	Piyachok Piyangsu	Senior Vice President CPRAM Company Limited(Ladkrabang)
〃	Charoen Kaowsuksai	Senior Advisor to Executive Officer CPRAM Company Limited, Ready to Eat Food Business
〃	Bheemsingh Melchisedec Dharmaraj	Director-Operations Elgi Equipments Limited
〃	Richard Santoro	Director of Quality Management GC America Inc.
〃	Norihiro Araki	President GC DENTAL (SUZHOU) CO., LTD.

顧問	Uday Mahajan	Vice President & National Head - Process Excellence and TQM Office Indus Towers Limited
〃	N. Sai Rama Krishna	Vice President / Head -Iron Complex, Business Excellence & Sustainability JSW Steel Limited, Salem Works
〃	Prabhat Kumar Ghorui	Executive Vice President JSW Steel Limited, Vijayanagar Works
〃	Dechun Tian	President Komatsu Machinery Manufacturing (Shandong) Company Limited
〃	Jayesh Parekh	Senior General Manager & Head – Quality and Business Excellence – ESP L&T Electrical & Automation, a unit of Schneider Electric India Pvt. Ltd.
〃	S. Ramadoss	Chief Human Resources Officer(CHRO) Lucas-TVS Limited
〃	Ashok Sharma	President Mahindra Agri Solutions Limited
〃	Rajan Jain	Chief Operating Officer National Engineering Industries Limited
〃	Li Caifen	Board Chairman Ocean's King Lighting Science & Technology Company Limited
〃	Jamalludin	President of PT Komatsu Indonesia PT Komatsu Indonesia
〃	S. Rajagopalan	Associate Vice President - MMD-STA and TQM Rane (Madras) Limited
〃	J. Shankar	Assistant General Manager (AGM) Rane Brake Lining Limited
〃	S. Rajkumar	President Rane Engine Valve Limited
〃	Gulshan Wadhwa	General Manager-Corporate QA and TQM Rane NSK Steering Systems Private Limited
〃	S. Bala Ganesh	General Manager-Corporate QA and TQM Zf Rane Automotive India Private Limited (Steering Gear Division)
〃	Jagmohan Singh Sekhon	Executive Advisor Reliance Industries Limited
〃	M Sankara Narayanan	Executive Director(Operations) RSB Transmissions(I) Limited
〃	Aslam Bin Abdullah	Management Representative Sanden International Singapore Private Limited
〃	Naveen Agarwal	Executive Director & COO Sanden Vikas (India) Private Limited
〃	Narin Chucharoen	Head of Productivity and Quality Excellence Council Siam Cement Public Company Limited
〃	Neeraj Chandna	Head - TQM SRF Limited, Chemicals Business
〃	B Parthipan	Senior General Manager, Manufacturing Systems & Corporate TQM Sundram Fasteners Limted
〃	Tripti Srivastava	Chief, TQM & CQA Tata Steel Limited
〃	Shesh Gupta	Unit Head Thai Acrylic Fibre Company Limited
〃	Jerry Kuo	CQO (Chief of Quality Officer) Unimicron Technology Corporation

（38 名）

顧問（学識経験者等，氏名五十音順）

顧問	池　澤　辰　夫	早稲田大学名誉教授
〃	大久保　尚　武	積水化学工業 社友
〃	狩　野　紀　昭	東京理科大学名誉教授
〃	久　米　　均	東京大学名誉教授
〃	坂　根　正　弘	株式会社小松製作所 顧問
〃	司　馬　正　次	筑波大学名誉教授
〃	細　谷　克　也	有限会社品質管理総合研究所 代表取締役 所長
〃	鷲　尾　泰　俊	慶應義塾大学名誉教授

（8 名）

運営委員会委員（順不同）

委員長	佐々木　眞　一	一般財団法人日本科学技術連盟　理事長
委　員	中　尾　　眞	株式会社ジーシー　最高顧問
	飯　塚　悦　功	デミング賞本賞選考委員会委員長，東京大学名誉教授
	小　原　好　一	前田建設工業株式会社　社友
	永　田　　靖	デミング賞審査委員会委員長，早稲田大学 教授
	棟　近　雅　彦	デミング賞審査委員会副委員長，早稲田大学　教授
	森　田　　浩	デミング賞審査委員会副委員長，大阪大学 教授
	山　田　　秀	デミング賞審査委員会副委員長，日経品質管理文献賞選考委員会委員長，慶應義塾大学 教授
	中　島　宣　彦	デミング賞委員会セクレタリー，一般財団法人日本科学技術連盟　顧問

⑵ 各委員会の編成分担（敬称略，各委員会委員長の役割は2025年11月１日現在）

デミング賞委員会の活動は，次の各委員会を編成して行いました.

① 運営委員会

委 員 長　一般財団法人日本科学技術連盟　理事長　佐々木　眞一

委　　員　８名

② デミング賞本賞選考委員会

委 員 長　東京大学名誉教授　飯塚　悦功

委　　員　13名

③ デミング賞審査委員会

委 員 長　早稲田大学　教授　永田　靖

委　　員　38名

④ 日経品質管理文献賞選考委員会

委 員 長　慶應義塾大学　教授　山田　秀

委　　員　39名

２．委員会の活動

⑴ 2025年１月21日に第１回デミング賞委員会を開催し，次の事項を決定いたしました.

① 委員，顧問の委嘱

② 2024年度収支決算

③ 2025年度予算

④ 各委員会委員長と委員の編成

⑤ 2025年度デミング賞委員会行事について

⑵ 2025年３月１日に第１回デミング賞審査委員会を開催し，本年度の実行計画，デミング賞の審査方法などについて検討し，本年応募組織の認定を行いました．これに則り実地調査のスケジュールと担当委員の分担を決定し，５月に海外審査に対して行われる書類審査を実施しました.

⑶ 2025年６月７日に書類審査合否判定会を開催し，海外応募組織に対して行われる書類審査の合否を決定いたしました．これに則り８月24日から９月12日の間に応募組織の実地調査を行いました.

⑷ 2022年デミング賞受賞１組織に対して，受賞３年後のフォローアップのための調査をオンラインも含めた形で実施することを決定いたしました.

⑸ 2025年９月20日にデミング賞本賞選考委員会，日経品質管理文献賞選考委員会，2025年９月27日に第２回デミング賞審査委員会をそれぞれ開催し，本年度の各賞の受賞候補者について審議し，受賞候補者の選定を行いました.

⑹ 2025年10月１日に第２回デミング賞委員会を開催し，各委員会からの報告に基づいて審議の結果，本年度の各賞受賞者を決定いたしました.

3．授賞行事

2025年10月１日の委員会における決定に基づき，下記のとおり授賞行事を行うことにいたしました.

⑴　デミング賞授賞式および受賞祝賀会

2025年11月12日　13：00 ～ 15：45　デミング賞受賞報告講演会
16：00 ～ 17：05　日本品質奨励賞授賞式
17：20 ～ 18：20　デミング賞授賞式
会場：経団連会館 ２階経団連ホール
18：35 ～ 19：35　受賞記念合同祝賀会
会場：経団連会館 ４階ダイアモンドルーム

4．これまでの受賞者（組織）数

1951年デミング賞創設以来，本年までの各賞受賞者（組織）数は次のとおりです.

デミング賞大賞　延べ33組織（再度の受賞組織２組織，海外12組織を含む）
デミング賞本賞　88名
デミング賞普及・推進功労賞（海外）　５名
デミング賞特別功労・実践賞　５名
デミング賞　延べ271組織（うち海外68組織）
⑷デミング賞　48組織（うち海外30組織）
2012年度の賞の名称変更以降の数※※※
⑸デミング賞実施賞中小企業賞（1994年まで）
38組織※
⑹デミング賞実施賞事業部賞（1994年まで）
５社５事業部※
⑺デミング賞事業所表彰（2009年まで）
16社20事業所（うち海外３社３事業所）※※
⑻デミング賞実施賞（2012年まで）
延160組織（うち海外35組織）※※※
日経品質管理文献賞　262件

※1995年度からデミング賞実施賞中小企業賞および実施賞事業部賞という名称は廃止され，デミング賞実施賞に一本化されました.
※※2010年度からデミング賞事業所表彰はデミング賞実施賞に一本化されました.
※※※2012年度から「日本品質管理賞」は「デミング賞大賞」に，「デミング賞実施賞」は「デミング賞」に名称変更しました.

以　上

発行　デミング賞委員会
一般財団法人 日本科学技術連盟

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