



INTEGRATIVE IMPROVEMENT SYSTEM DIAGNOSTIC



Integrative performance improvement is the new approach to sustainable operational improvement. Leading companies have found that without an integrative improvement approach, performance improvement using methodologies such as Lean and Six Sigma is not sustainable.

The Integrative Improvement System Diagnostic (iiSd) assesses your organisation's maturity in terms of this new approach.

TAKE 30 minutes
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to complete the online Integrative Improvement System Diagnostic (iiSd), your iiSd report and a one-hour analyst feedback session (via Webex), which measures your organisation's maturity across 5 stages of excellence and against 9 themes. insight into your organisation's capability to transform the end-to-end supply chain to create sustainable operational excellence.

your results against Fortune 500 leaders in the Food and Beverage, Healthcare, Pharmaceutical, Chemical, and Mining & Mineral Processing industries. what good looks like in excellent global organisations.



INTEGRATIVE IMPROVEMENT SYSTEM DIAGNOSTIC

Introduction

This assessment has been designed to evaluate an organisation's ability to build and sustain a culture of operations excellence. Organisations such as Apple, Proctor & Gamble, Dell and Toyota are the benchmarks for the desired end state of operations excellence, but despite many books, articles and white papers on the advantages of Lean, Six Sigma and similar approaches, most organisations have not had sustainable success as a result of adopting these methodologies. The few organisations that have, typically needed to undergo long-lasting and significant organisational transformation to achieve this.

To attain successful operations excellence, an organisation needs a robust integrative improvement system (iis). This allows an organisation to embed operations excellence into the fibre of the business, rather than treating it as a project, philosophy or intervention driven by a small handful of experts — 'the few and the proud'.

The iis requires three key structural components to effectively drive the transformation process:

1. Maturity- and process-based transformation
2. Functional integration
3. Sustainability through a three-tiered system

Component 1: Maturity-based Transformation

There is no 'quick-fix' approach to changing an organisation's culture. Engaging employees, developing their skills and competencies to effect process improvements, and fundamental shifts in leadership style from 'cop to coach' (servant leadership), takes time and effort.

A maturity-based management system needs a three- to five-year execution 'road map' and must be capable of measuring the stage of maturity for all process areas.

Transferring process improvement ownership from technical experts to front-line employees requires structural reorganisation around lateral processes. Employee skills and knowledge need to be developed and employees need to be motivated to remove all obstacles (including traditional management's tendency to solve problems on their behalf). Employees can only be held accountable for delivery of results once the above has been completed.

A maturity-based management system needs a three- to five-year execution 'road map' and must be capable of measuring the stages of maturity for all process areas. Appropriate implementation actions can then be planned according to the maturity levels of the process areas and their process-based teams; this ensures consistency and a logical flow of actions in the long-term execution plan, as well as a resultant culture-based change.



Component 2: Functional Integration

One of the key principles of the new integrative approach is that the organisation should be designed around processes, products and customers. Multifunctional teams optimise processes and value streams to deliver superior products to customers.

This process-based and integrative approach must also prevent the sub-optimisation that often arises from more traditional approaches to functional improvement. This means that functional improvement requirements (quality, maintenance, Demand and Supply planning, HR, etc.) and the continuous improvement methodologies used (Lean, Six Sigma, TPM, TQM, WCO, Demand Driven Value Network, Integrative Supply Chains and Supply Chain Optimisation etc.) are on the same platform, and are executed simultaneously and in concert with each other.

Component 3: Sustainability through a Three-tiered System

Sustainable improvement does not result from the mere application of continuous improvement (CI) tools. The introduction of Autonomous Maintenance, One Point Lessons, 5 Why problem-solving, Visual Management, Sales and Operations Planning, Demand Planning etc., are not sustainable without supporting systems and underpinning management principles. Sustainable change requires a three-tiered system. These three tiers are management principles, operating systems, and tools.

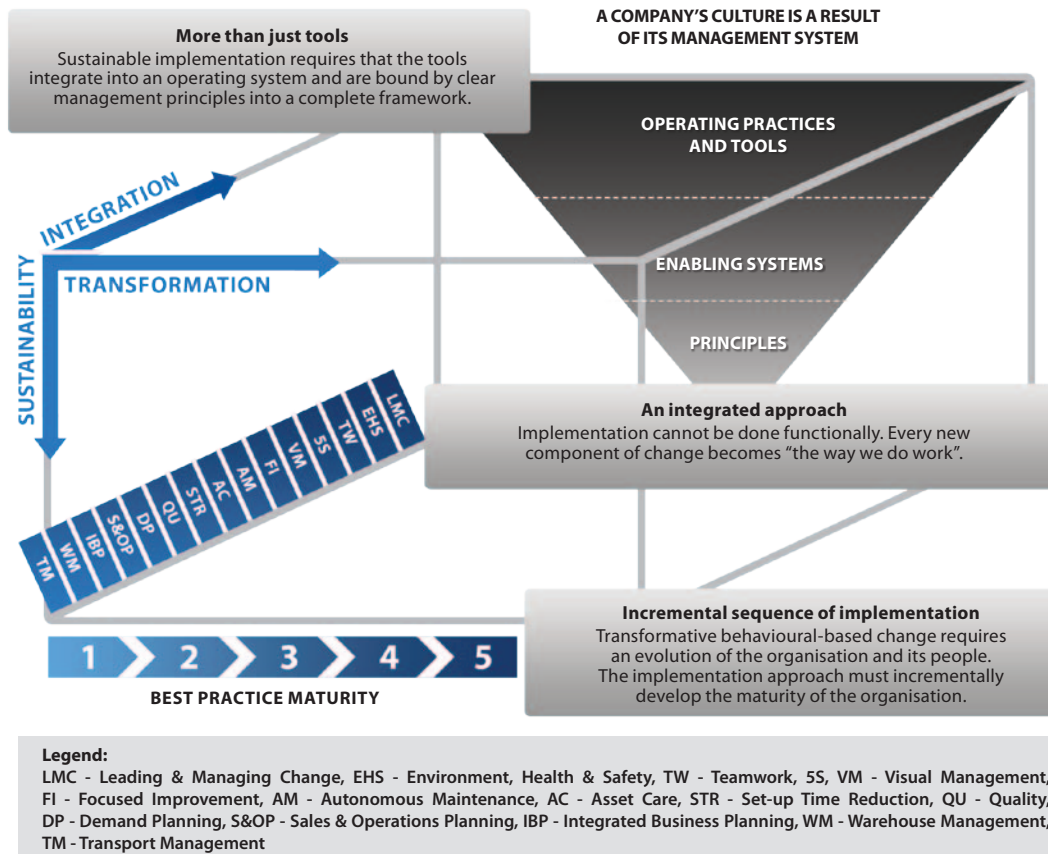
An example in the quality function serves to illustrate the three tiers:

1. A fundamental principle of the modern quality management approach is: "Ensuring good quality by controlling it at the source: in the process, by the operator, and at the supplier".
2. The quality system will document the training plans, audit procedures, SOPs, quality plans, critical control points, etc., to help ensure that the quality assurance system is in place (controls, measures and procedures).
3. The operators will use tools such as run charts and SPC charts to ensure processes remain under control.

An effective quality management system prescribes that the principles, systems and tools are in place. Similar requirements are true for all functional systems.

A complete integrative improvement system requires that the management principles, systems and tools are ready in all functions to ensure that improvements are sustainable, that the transformation process is managed effectively through a maturity-based system, and that the functional improvement approaches and improvement methodologies are integrated. Figure 1 illustrates the structural components of an effective improvement system.

Figure 1: The Structural Components of an Integrative Improvement System





INTEGRATIVE IMPROVEMENT SYSTEM DIAGNOSTIC (iisD)

An organisation's initial approach to operational improvement is typically project-based and often takes place only in selected functions. Organisations identify their critical systems — for example, the quality system in the food industry, or the maintenance system in the aviation or chemical industries. Due to the importance of such systems to an organisation's survival, the corporate organisation will typically set up a policy document and then audit the operational areas to ensure policy conformance. These are examples of functional improvement approaches.

As an organisation's understanding of operational improvement matures, it normally identifies the need to standardise approaches and move from project-based improvement to a more inclusive, process-based approach.

Organisations also typically adopt one or more of the standard CI methodologies. A separate function is usually created to drive the implementation of these methodologies, and the approach adopted often varies across different areas of the organisation.

As an organisation's understanding of operational improvement matures, it normally identifies the need to standardise approaches and moves from project-based improvement to a more inclusive, process-based approach. This evolution results from the recognition that there is a limit to the number of systemic opportunities that can be addressed using a project-based approach to operational improvement.

The benefit of engaging all organisational levels to attack situational and systemic problems eventually becomes apparent.

A popular industry trend is to develop and implement operational or performance systems (for example, TPS). Several such systems have been introduced into organisations, but to date, there has been no shared framework that enabled the understanding or benchmarking of such systems. The attached assessment will allow an organisation to accurately determine both the maturity and gaps in its operational improvement system.

The framework described below sets the parameters against which the assessment is made.

Benchmarking your Improvement System

Figure 1 on the previous page depicts five stages of evolution in operational improvement systems. Typically, world class organisations have evolved through these stages as they have experimented with CI. If we recognise that those organisations which have achieved the 'holy grail' of culture-based operational excellence have done so through their improvement systems, we need to understand the critical features of these systems.



Key features required within improvement systems:

Strategy

Is your end state vision clear? What will the new work organisation look like? Is this vision described through the improvement system? Does the leadership group responsible for the improvement system design understand the critical components and features of a successful system? Have these been built into the design?

Standardisation

Successful organisational change across the supply chain requires a standardised approach, a shared end vision, and a standardised and logical execution plan. This is the detailed 'how to', the step-by-step methodology that drives sustainable transformation over multiple years, where actions depend on the maturity of the process area.

Integration

Functional system methodologies relating to quality, maintenance, planning, HR, etc., need to be on the same platform as the other improvement methodologies that are in place. The 'how' and 'when' of the planned improvement actions should depend on the type of process and its operational maturity, and need to be integrated across the organisation to enable seamless front-line execution. There must be a shared dashboard to enable visibility of the progress on performance and practice improvement made by all operational areas in the supply chain.

Transformation

Implementation phases for each function and the operational improvement methodologies must be documented and detailed, to enable an explicit understanding of the skills and competencies that employees will need. Organisational design changes should enable employees to be engaged within multifunctional, process-based and customer-focused teams.

Systematisation

Systems need to be integrated with the front-line tools to enable and ensure sustainable use and application, and include elements such as SOPs, audits, schedules and competency acquisition.

Training and Development

Implementation is ultimately the responsibility of operational management. Initial deployment may involve facilitators to help build operational manager skills and ensure consistency across the organisation. The skills development required for sustainable transformation, requires that training be built into the overall execution road map and delivered just-in-time for the deployment of the new front-line tools, processes and structures. Organisations standardising their management system across multiple geographical locations, will require content and training to be available in all relevant languages.

Roles and Responsibilities

Rapid deployment across multiple sites and locations can be enabled through the use of centralised and regional CI resources. Handover to operational personnel and the responsibility for building capability within every process area, needs to be clearly documented and built into the performance management system.

Knowledge Management

Managing and sharing implementation learning across the organisation will ratchet up progress. Learning occurs at two levels - learning about implementation processes, and operational learning as process teams eliminate non-conformances (tacit knowledge being made explicit). The sharing of this learning needs to be made possible through the technology used by the improvement system.

Results and Tracking

The organisation's ability to track the implementation of practice, process and performance improvement, benefits both employees and management.

A structured, codified and integrative improvement system enables exponential returns

An organisation's improvement system can be benchmarked on a maturity scale based on the stages shown in Figure 2, and against the abovementioned components and features.

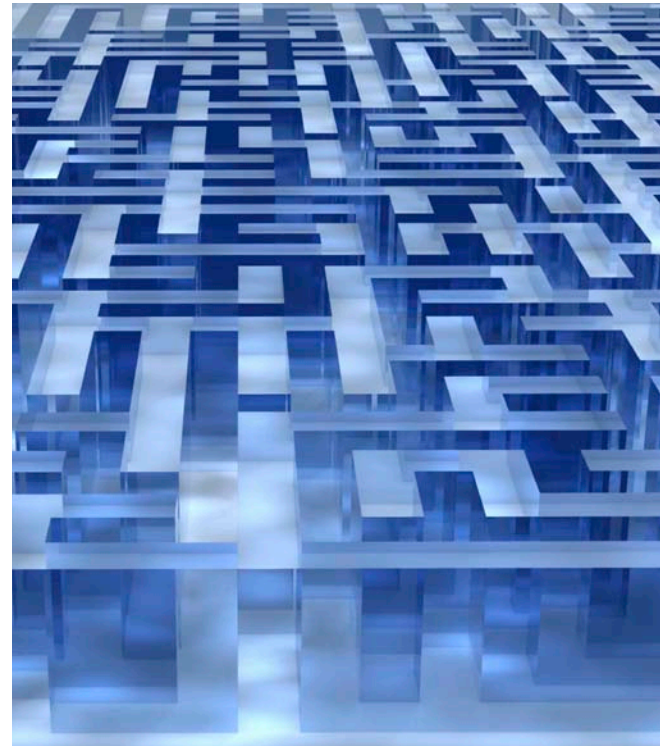
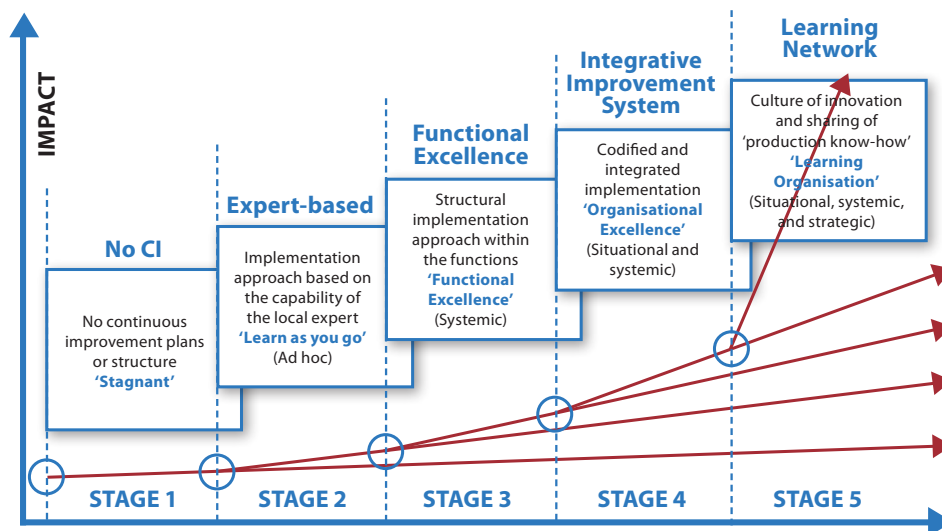




Figure 2: Stages of Maturity in an iisD



Stages of Maturity

Stage 1: No Continuous Improvement

Organisations in this stage manage their operations as a cost-adding function only. No formal improvement initiatives are in place.

Different experts often have diverse end state visions as well as different road maps for how to reach the end state.

Stage 2: Expert-based

The focus of organisations at stage 2 is to minimise the potential negative impact of operations on the business. Internal financial control systems are the primary means for monitoring operational and supply chain performance. External experts (corporate employees or consultants) are used for decisions on strategic operational issues and to lead operational improvement efforts in the process areas. These experts have a vision of where they want to go from previous implementation experience and a plan for how to get there. They're often focused on the function (maintenance, quality, procurement, planning, warehousing, distribution etc.) or the methodology (Lean, Six Sigma and others).

Different experts often have diverse end state visions as well as different road maps for how to reach these. At this stage, operational improvement is often project-based and takes place predominantly in the manufacturing sites. There is often no standard improvement approach across the process areas. The transformation process and competency development requirements for the organisation are neither documented nor understood.

Stage 3: Functional Excellence

Organisations at this stage follow industry practice and seek parity or better with competitors. The planning horizon for investment decisions is generally within one single business cycle. Capital investment is often regarded as the primary means for catching up to competition or achieving competitive advantage.

By now organisations have identified their critical systems and these are generally industry-dependent. (For example, the aviation and chemical industries require fail-proof maintenance systems as failure of these critical systems can result in the loss of life). At stage 3, organisations will have pushed the evolution of their critical systems, codifying and standardising the required components and ensuring that all



process areas and the extended supply chain comply with the requirements of the system. A standard operational improvement approach might also have been adopted. Functional initiatives and standardised operational improvement methodologies will be integrated, but not necessarily on the same platform. Competency development requirements within functions are understood, but there is no cross-functional visibility. Improvements remain predominantly functional rather than process-based. The standard approaches adopted, will have been translated to allow process areas in all locations to comply.

Stage 4: Integrative Improvement System

Organisations at this stage are managing their internal operations as a means to obtain competitive advantage. Operational investments are screened for consistency with the business strategy, and business strategy changes are translated into operational implications. The demand-driven supply network is seen as key to major marketing, customer and product decisions. Long-term initiatives (for example, culture-based change programmes) are pursued to acquire sustainable capabilities in advance of needs.

These organisations have evolved to a complete and integrative improvement system. They have documented best practice requirements across all their functional and process systems, with accompanying road maps and diagnostic tools being made available to enable the process areas to measure their current status and close gaps. All functional and operations improvement methodologies will have been integrated onto a shared platform. At stage 4, operational improvement is predominantly process-based and the entire organisation is engaged in improvement across all areas of the demand-driven supply network. The approach to organisational transformation is by now fully documented, including the process for multifunctional, process-based and customer-focused teams to acquire all their necessary competencies.

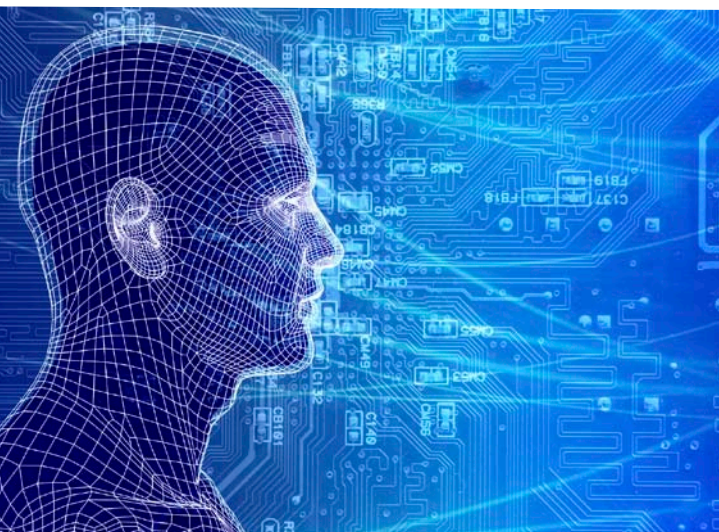
The improvement system, including implementation detail and training programmes, will be available in all the languages that are necessary for employees to be engaged across the locations in which the organisation operates. Technology is embedded in the improvement system, to allow rapid sharing of implementation techniques and operational knowledge between functions and process areas across the whole demand-driven supply network. Process-based performance indices are continually tracked, as are the improvements arising from all projects. Operational improvement status can be measured across all process areas within the demand-driven supply network and progress is visible to all.

Stage 5: Learning Network

This is the 'holy grail' of operational and demand-driven value network improvement. Efforts are continually made to anticipate the potential of new demand-driven value network practices and technologies. All aspects of the internal and external demand-driven value network are evaluated for their potential to provide competitive advantage.

These organisations are learning at multiple levels, not only about improving processes, systems and practices, but also about improving the learning processes themselves. Systems are in place to encourage and facilitate learning and collaboration across the whole value network, both internal and external.

The five stages are depicted in Figure 3. Attaining each stage allows a progressively increased return on investment (ROI).





INTEGRATIVE IMPROVEMENT SYSTEM DIAGNOSTIC (iiSd)

Figure 3: iiSd Matrix

iiSd Overview: Integrated Improvement System Diagnostic (iiSd)					
THEMES	STAGE 1: NO CONTINUOUS IMPROVEMENT	STAGE 2: EXPERT-BASED	STAGE 3: FUNCTIONAL EXCELLENCE	STAGE 4: INTEGRATIVE IMPROVEMENT SYSTEM	STAGE 5: LEARNING NETWORK
1. Strategy	No formal operational improvement plans are in place. A strategy to codify critical functional systems has been formulated.	A strategy is in place to codify a standard improvement approach for critical functional systems. There are many operations improvement projects, but they are disconnected.	Codified best practices for critical functional systems are in place. There is a strategy to put in place an iiS. Plans to codify best practice for all functional systems exist. There is a standard approach to operational improvement, but it is not integrated with functional improvement initiatives.	A strategy has been formulated to develop a learning network through effective knowledge sharing. An iiS is in place to integrate all functional and systemic improvements. The iiSd is process-based to enable an effective demand-driven supply network.	Rapid sharing of know-how and collaboration to enable a demand-driven value network is in place.
2. Standardisation (Codification)	No standardisation of operational improvement methodologies exists.	There is a non-standard approach to improve critical functional systems. This approach is determined by individual experts. There is no standard operational improvement methodology.	Codified and standardised best practice is in place for key functional systems. A standardised operational improvement methodology has been formulated. The standard incorporates a best practice diagnostic to audit execution and processes for implementation.	A standardised and codified approach is in place to integrate functional and process-based operational improvement methodologies.	Standard processes for collaboration and rapid sharing of know-how to enable a demand-driven value network.
3. Integration	No common improvement methodologies are in place.	Various operational improvement methodologies are in place, but not integrated with the functional improvement initiatives in the selected critical functions.	Codified and standardised best practices are in place for key functional systems. A standard operational improvement methodology has been formulated.	Standardised and codified best practices are in place for all functional systems. There is a standardised and codified operational improvement methodology. The functional- and process-based operational improvement methodologies are integrated and visible in one framework, and activities are prioritised and sequenced, based on organisational maturity.	Integration allows for collaboration across the value network to continually improve best practice based on customer expectations, rather than functional demands.
4. Transformation (Functional to process-based)	There has been no consideration of the required individual and organisational transformation.	Experts drive ad-hoc transformation within silos across selected areas of the supply chain.	There is a documented, maturity-based approach to building competencies within critical functions. Change management and training requirements to develop skills, motivate and empower all employees within the functions are available and utilised.	The Integrative Improvement System (iiS) provides a platform for managing the transformation incrementally, based on the organisations current state of maturity. The organisation has moved from being functional-based to process-based, and is focused on creating value for the customer.	Transformational processes across the demand-driven value network are clear and incorporate all members of the network.
5. Systematisation	Limited application of improvement tools which are not effectively linked to systems.	Some leadership principles based on operational improvement methodologies are in place. Operational improvement tools and systemic improvement initiatives are in place.	Leadership principles to support functional excellence are in place. Management principles, systemic requirements and tools are integrated within each function. Functional systems and tools are not fully integrated to support and extend supply chain improvement.	An integrated set of guiding leadership principles is in place. An integrative improvement system manages the use of tools and systems to support process-based optimisation.	The Integrative Improvement System (iiS) drives an outside-in business focus by sensing market opportunities, and ensuring agile use of tools to capture and interpret this data.



TRACC Overview: Integrated Improvement System Diagnostic (iiSd)

THEMES	STAGE 1: NO CONTINUOUS IMPROVEMENT	STAGE 2: EXPERT-BASED	STAGE 3: FUNCTIONAL EXCELLENCE	STAGE 4: INTEGRATIVE IMPROVEMENT SYSTEM	STAGE 5: LEARNING NETWORK
6. Training and Development	No formal process to build internal improvement capability is in place.	Improvement activities led by capable internal or external experts.	There is strong support from leadership for competency development. Formal processes are in place to build competencies at all levels in selected critical functions. Training content is available in all required languages.	Operational leadership is capable of driving the building of competence for all employees so as to optimise the performance of their process area. All competence building, including advanced operational improvement methodology and change management skills, is integrated into the overall transformation road map.	The whole network is fully capable of optimising its customer value delivery processes.
7. Roles, Goals, and Responsibilities	No formal operation improvement roles, goals or responsibilities exist.	Experts with formal operational improvement roles, goals and responsibilities are in place within selected areas of the supply chain.	Prioritised functional and operational improvement goals and requirements are built into functional job descriptions and performance management processes.	Responsibility for operational improvement is in everyone's job description. Line employees are fully responsible for process-based improvement and functional experts for functional integrity. Front-line workers are responsible for situational problem elimination and line management for systemic improvement activities.	The culture of the organisation enables proactive efforts for enhancing customer value and ongoing improvement of results for all stakeholders.
8. Knowledge Management (Shared learnings network)	There is limited sharing of learning.	No standard approach to share learning and operational knowledge. Experts meet occasionally, but most sharing is ad-hoc.	Structured sharing exists within functions. The operational improvement organisation shares process-orientated learning in a structured way. Some tools are in place to facilitate sharing of operational knowledge, but no structured system exists.	Structured cross-functional and process-based sharing of implementation knowledge and learning takes place across the demand-driven supply network. A systemised methodology exists to capture, manage, share, and collaborate around operational knowledge across the demand-driven supply network.	The culture and systems allow for sharing and collaboration across the demand-driven value network. There is continual sharing of learning across industry boundaries.
9. Results and Tracking	Ad hoc improvements which are generally not sustained and results not measured/tracked.	Selected improvement projects based on a structured loss and waste analysis are in place. Experts report results formally and projects yield net benefits to the organisation.	Systems exist to track project and functional improvements, but these cannot always be linked to improvements in KPIs. Functional KPIs are in place and there is year-on-year improvement in functional performance.	Results are tracked within internal functions and across internal processes. These results are focused on customer- and consumer-based KPIs. The process-based organisation is held accountable for results through a formal performance management system.	The organisation measures and shows progress on KPIs such as overall value creation, collaboration, learning, and end-to-end cost to serve.



INTEGRATIVE IMPROVEMENT SYSTEM DIAGNOSTIC (iiSd)

iiSd Assessment Guidelines

(This assessment is confidential and FREE).

iiSd is an online service that allows you to complete a 30-60 minute survey that will provide a high-level assessment of your organisation's continuous improvement (CI) maturity and its capability to implement, develop and sustain a CI culture.

Ideally, this assessment should be completed by a multifunctional group of senior leaders across the supply chain. Discuss each of the criteria to establish which CI practices, methodologies, and competencies are in place. If there is any doubt within the group, the answer should be 'No'.

Evidence

It is important that actual evidence of the desired activity can be seen or that the required knowledge can be demonstrated. Some criteria may no longer be applicable; if the team has gone beyond the maturity stage under consideration, and progressed to criteria in the next maturity stage, the answer to the question should be 'Yes'.

Scoring

The criteria are numbered according to the themes. To be competent at a certain stage within a theme, the group must have answered 'Yes' to all the criteria under the theme at that stage.

Mapping

There are no criteria for Stage 1. If you have not yet reached Stage 2, assume that you are still at Stage 1.

Completing the Assessment Online

Join the *TRACC What Does Good Look Like?* (WGLL) online community of best practice to conduct a benchmark survey online. Go to www.etracc.net, join WGLL and fill in the online assessment. This should take 30-60 minutes if you complete it alone. If you complete it as a team and debate the appropriate responses, it may take longer.

Should you and your team require facilitation to accurately complete the assessment please feel free to request a WebEx by emailing Lorinda Ellis, lellis@ccint.net

The complimentary online iiSd contains 150 questions across the 9 themes:

- | | |
|--------------------|-------------------------------|
| 1. Strategy | 6. Training and Development |
| 2. Standardisation | 7. Roles and Responsibilities |
| 3. Integration | 8. Knowledge Management |
| 4. Transformation | 9. Results and Tracking |
| 5. Systematisation | |

All the questions are designed to measure your organisation against 5 stages of CI maturity:

- | | |
|------------------------------|----------------------------------|
| 1. No Continuous Improvement | 4. Integrated Improvement System |
| 2. Expert-based | 5. Learning Network |
| 3. Functional Excellence | |

iiSd Assessment Outcomes

After completing the assessment you will receive the following:

- The Integrative Improvement System Progress Chart report summary, which measures your organisation across 5 stages of maturity for 9 improvement themes and benchmarks you against other organisations in your industry.
- An opportunity to perform a FREE annual assessment and measure your organisation's progress over time.
- *What Does Good Look Like?* (WGLL) membership gives you access to an online community of best practice, where you can see photographic examples of CI and collaborate with other members of the community, and download templates, podcasts and presentations from leading operations around the globe.

NOTE: The TRACC team will not make your iiSd results available online for competitors or colleagues to access. The results are treated as confidential and will be mailed to you electronically.

Glossary of Terms

Through effective use of an integrated improvement system, the concept of what constitutes a supply chain will evolve over time and as maturity levels increase. For the purposes of this assessment, the following stages of maturity have been defined (note that this is an evolutionary process and therefore doesn't involve step changes between such levels):

Integrated Improvement System (iiS)

A standardised system that drives operational improvement across all processes and uses a codified road map to integrate the activities of all organisational entities.

Supply Chain

In the early stages of maturity, the supply chain is generally seen as the internal functions of procurement, manufacturing, warehousing and logistics. Sometimes, manufacturing and the support functions of finance, human resources, planning, etc. are erroneously excluded from this view.

Extended Supply Chain

In the extended supply chain, the organisation begins to look beyond its own boundaries to upstream and downstream partners and at network management/optimisation. Although the mindset is normally still one of inside-out thinking, cost reduction, efficiency, and product-push to customers/consumers, it is often reactive in nature.

Demand-driven Supply Network

The focus becomes broader and more integrative across network partners, with outside-in thinking and customer service and satisfaction becoming more important. The need to balance demand and supply becomes more significant, and results in sales and operations planning being of strategic importance.

Demand-driven Value Network

Outside-in thinking, demand-sensing and -shaping, and strategic trade-off decision-making are used to drive maximum value from the network as a whole, with very close collaboration between intra- and inter-organisational marketing, sales, and supply chain organisations (and their support departments) within the network.

Operational Improvement Methodology

Standard improvement methodologies applied to improve processes. These methodologies include Lean, Six Sigma, Total Productive Maintenance (TPM), Total Quality Management (TQM), and World Class Operations (WCO).

Functional Improvement

Functional improvement refers to improvement work done silo-style within functions. These include maintenance, quality, procurement and planning. Depending on the industry, most organisations have codified standards in some of their critical functions. The aviation industry, for example, has codified required maintenance practices and audits to ensure that these codes are followed. The food industry has done the same for the quality and food safety systems. The functions are then closely monitored to ensure standards are followed and improvements are driven if standards are not met.



connect



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