

Smart Industry Readiness Index

Invitation to Participate

Jan 2021

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Agenda

- ▶ What is SIRI
- ▶ SIRI Frameworks & Tools
- ▶ Taking the Official SIRI Assessment (OSA)
- ▶ Manufacturing Transformation Insights
- ▶ WEF-EDB SIRI Internationalisation Program
- ▶ Getting Involved with SIRI

What is the Smart Industry Readiness Index (SIRI)



The world's first quantitative framework to evaluate and benchmark manufacturing facilities



Catalysing the transformation of manufacturing

The Smart Industry Readiness Index (SIRI) was created by the Singapore Economic Development Board (EDB) in partnership with a network of leading technology companies, consultancy firms, and industry and academic experts. SIRI comprises a suite of frameworks and tools to help manufacturers – regardless of size and industry – start, scale, and sustain their manufacturing transformation journeys. SIRI covers the three core elements of Industry 4.0: Process, Technology, and Organisation.

History of SIRI

- ▶ Started out as a single framework with an accompanying self-diagnostic tool
- ▶ Strong take-up, with >1,000 companies and government organisations using it for their transformation efforts
- ▶ Program expands to offer a wide range of new concepts and services, including an Official SIRI Assessment (OSA) program
- ▶ Published first Manufacturing Transformation Insights Report in 2019

HISTORY

13 NOV 2017

The Smart Industry Readiness Index is launched



18 DEC 2018

Official SIRI Logo is released



22 OCT 2019

The first Manufacturing Transformation Insights Report is announced at ITAP 2019



22 MAR 2018

300 funded SIRI Assessments are provided to the manufacturing community



1 APR 2019

Second tool under SIRI, the Prioritisation Matrix, is launched at Hannover Messe 2019



14 AUG 2020

Inaugural batch of Certified SIRI Assessors graduates

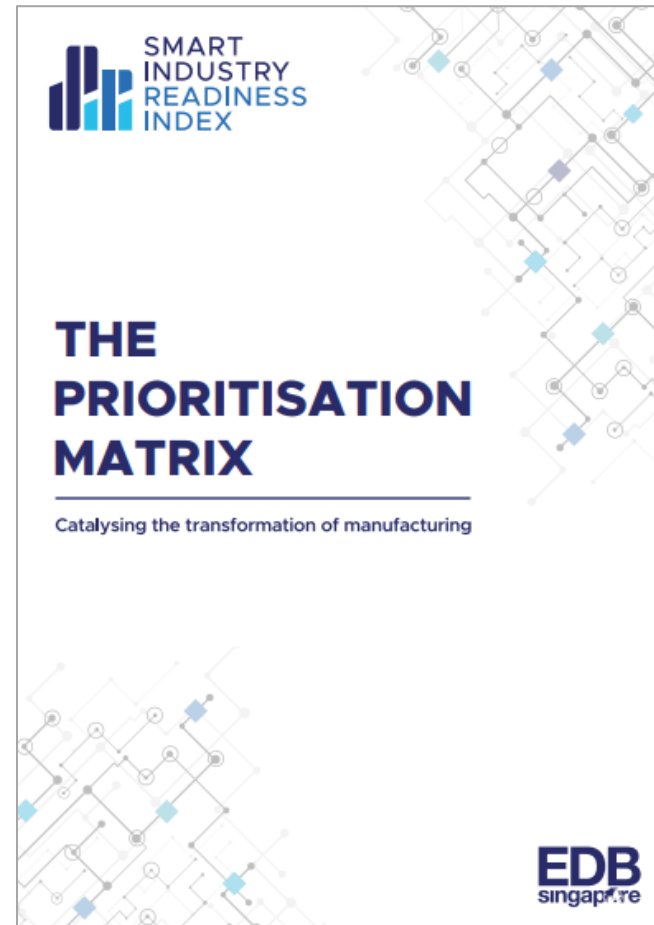


The SIRI Frameworks and Tools



Whitepaper Publications

Featuring new concepts, frameworks, tools, benchmarks and insights



Designed to support manufacturers throughout their transformation Journey



THE SMART INDUSTRY READINESS INDEX

Catalysing the transformation of manufacturing



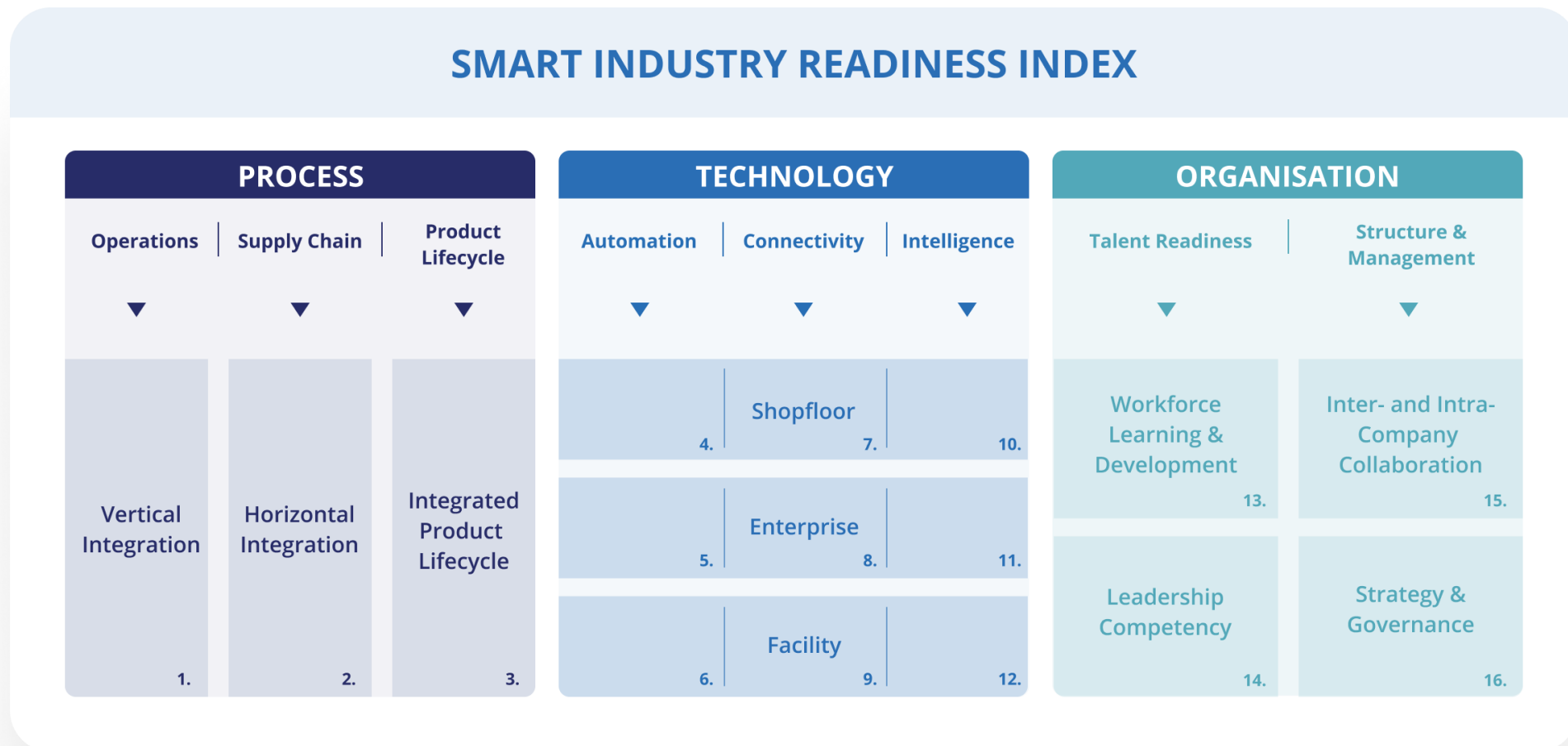
Official Introduction of the SIRI Framework: which presents the three building blocks of Industry 4.0: Process, Technology, and Organisation

LEAD Framework: circular, continuous four-step process manufacturers can adopt in their approach towards transformation



Assessment Matrix is the world's first Industry 4.0 self-diagnostic tool aimed at helping companies worldwide evaluate the current state of their factories and plants.

The SIRI Framework & Assessment Matrix Dimensions





TIER Framework: Conceptual framework that underscores the 4 key principles of a holistic prioritisation

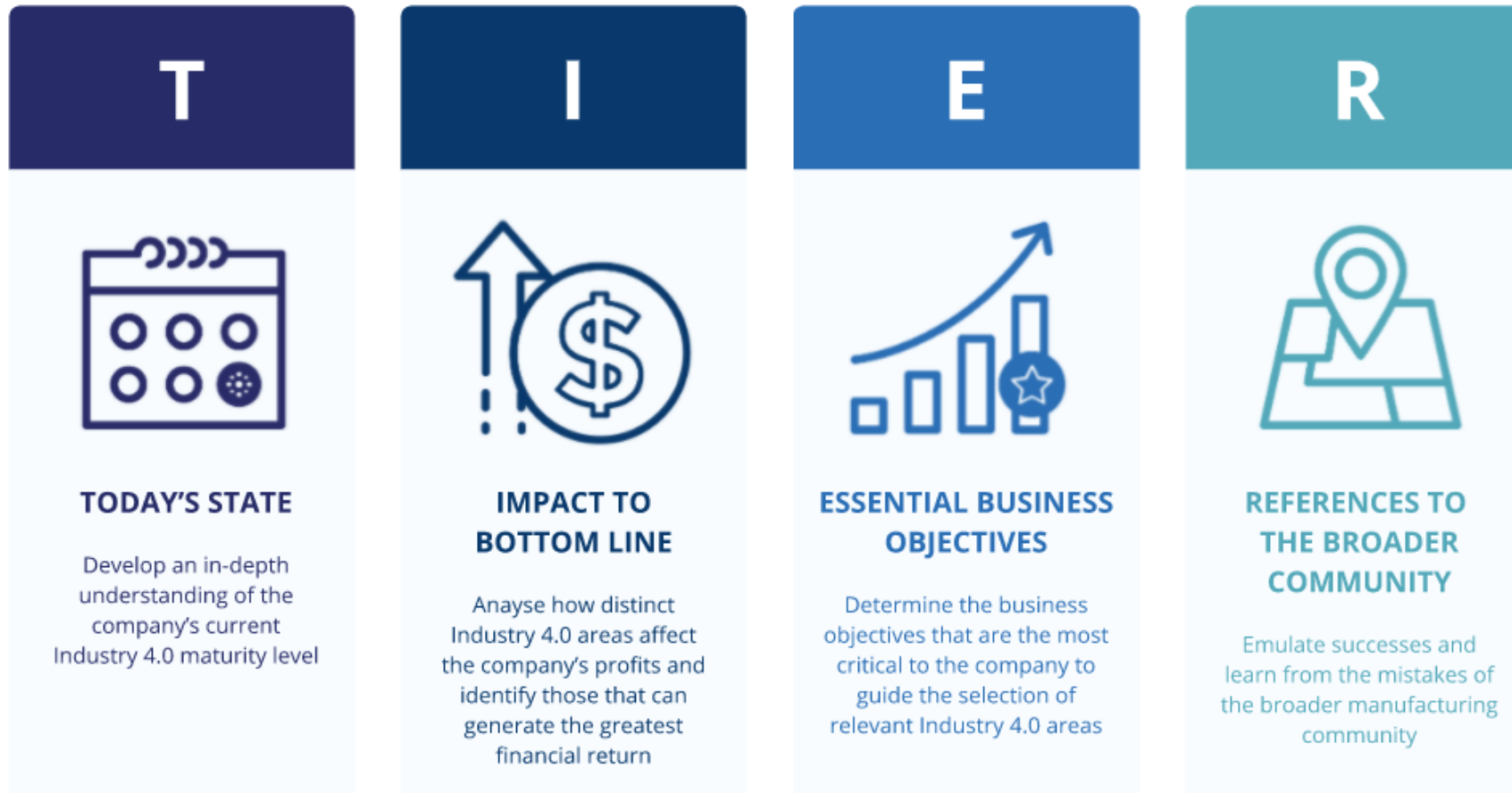
Prioritization Matrix: management planning tool, to assist companies identify the high-priority areas in which improvements will bring the most benefit



THE PRIORITISATION MATRIX

Catalysing the transformation of manufacturing

TIER Framework: four principles for holistic prioritisation exercise



The Official SIRI Assessment (OSA)

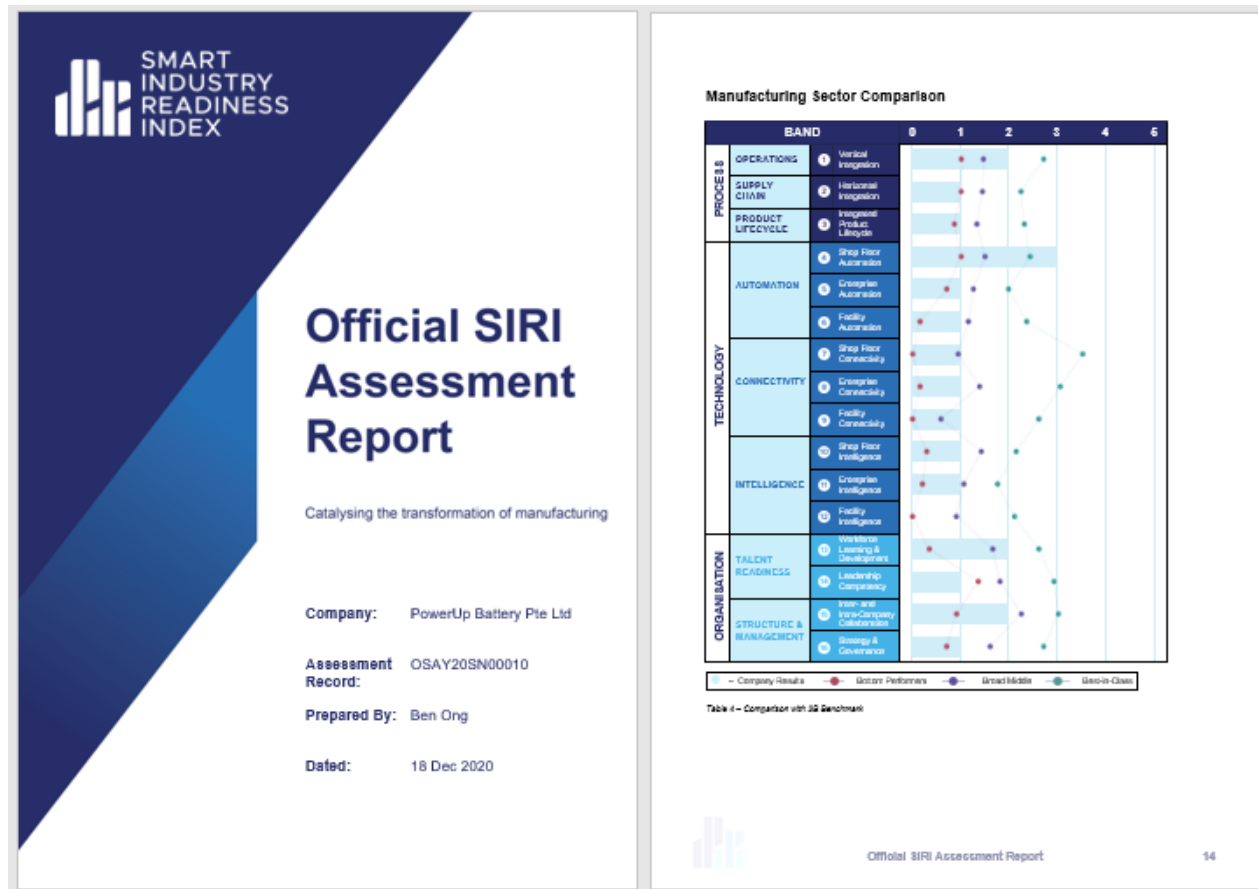
The Official SIRI Assessment

Performed by a Certified SIRI Assessor (CSA), the Official SIRI Assessment (OSA) is an independent assessment of a factory or plant to evaluate its current state, identify high-impact areas to focus on, and benchmark it against industry peers.

| Phase | | Description | Time Commitment |
|-------------|--|--|-----------------|
| I | Onboarding (Planning and Preparation) | An onboarding call to prepare the company on what to expect, the materials/information to be prepared, and the key personnel to be involved | ~1 Hour |
| II | Evaluation | Workshop discussions with an on-site facility visit to evaluate the current state of the company's manufacturing facility and characterise the variables in determining the high-impact areas to focus on. | ~1 – 1.5 days |
| III | Debrief (Analysis and Review) | A debrief session to review the OSA results and interpret the findings. | ~0.5 days |
| Deliverable | | An Official SIRI Assessment (OSA) Report | 2 days |

The OSA Report

Companies will receive an official report at the conclusion of the OSA



A

Current State of Your Facility

B

Prioritised Areas For Improvement

C

Benchmarks Against Industry Peers

Certified SIRI Assessors (CSA)

A **Certified SIRI Assessor (CSA)** is a professional who has completed the CSA Programme and is formally recognised by the SIRI Institute to conduct an Official SIRI Assessment.

The CSA Programme

Established to formally qualify independent individuals who are able to professionally assess a manufacturing facility using SIRI and its accompanying frameworks and tools. The CSA Programme comprises of 2 components:

- SIRI Assessor Training Course (40-hour course)
- SIRI Assessor Certification Scheme (Theory & Practical Examination)

APPLICATION PROCESS

1



ACHIEVE QUALIFIED WORK EXPERIENCE

Gain the necessary work experience requirements. Your operational, project management and advisory experiences must be directly involved with the manufacturing sector. Experience in this space is critical in conducting SIRI Assessments in a consistent and accurate manner.



ATTEND THE SIRI ASSESSOR TRAINING COURSE

Enroll for the CSA Training Program offered by a Approved Training Provider and complete the requirement of 40 learning hours of in-class coursework. The SIRI Assessor Training Course will equip industry practitioners with the requisite industry knowledge and skills to become a SIRI Assessor.

2

3



PASS THE CSA EXAMINATION

CSA Examinations are offered at regular intervals throughout the calendar year. Please check the published dates for your planning. The examination comprises of both theory and practical components.



REGISTER FORMALLY ON THE SIRI PORTAL

Candidates who have passed the CSA Examination are to attend the CSA Orientation Programme and formally register themselves on the SIRI Portal.

4



Manufacturing Transformation Insights



MANUFACTURING TRANSFORMATION INSIGHTS REPORT 2019



Data-backed snapshot of the current state of industrial transformation across multiple industries

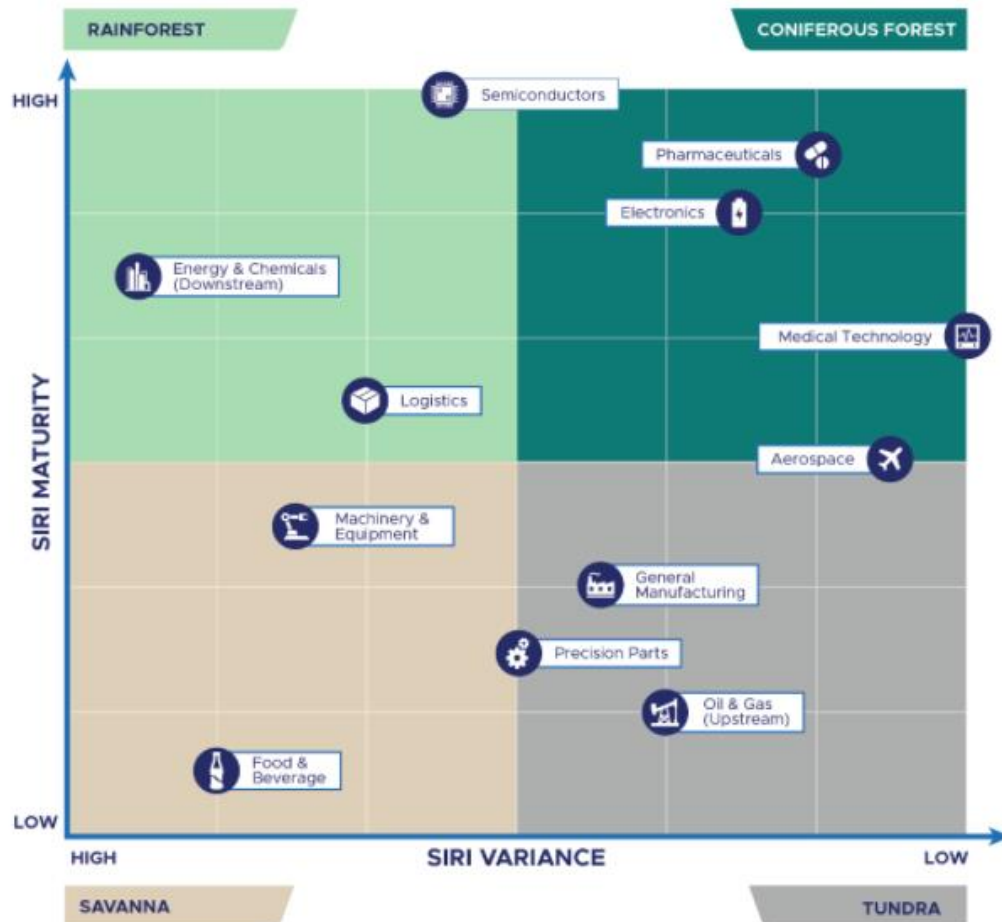
Observations relating to the three building blocks on Industry 4.0 – Process, Technology and Organisation



Benchmark for manufacturers to assess and compare their Industry 4.0 maturity levels against those of their peers in the same industry

Archetypes of Transformation

Understanding the transformation profile of different manufacturing sectors



Characterising the 4 main types of transformation profiles that a manufacturing industry might follow, based on the maturity and variance of transformation within that industry.

Coniferous Forest

High maturity; Low Variance

Rainforest

High maturity; High Variance

Savanna

Low maturity; High Variance

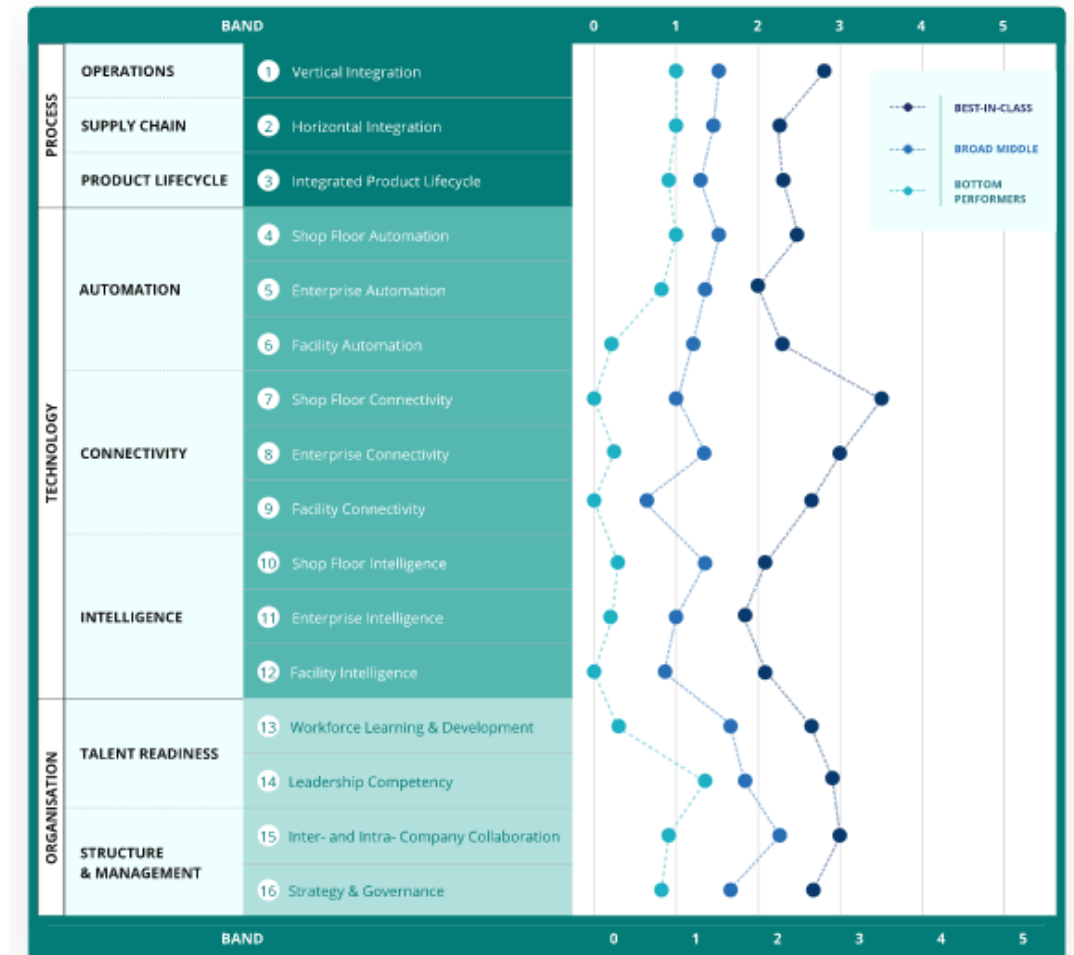
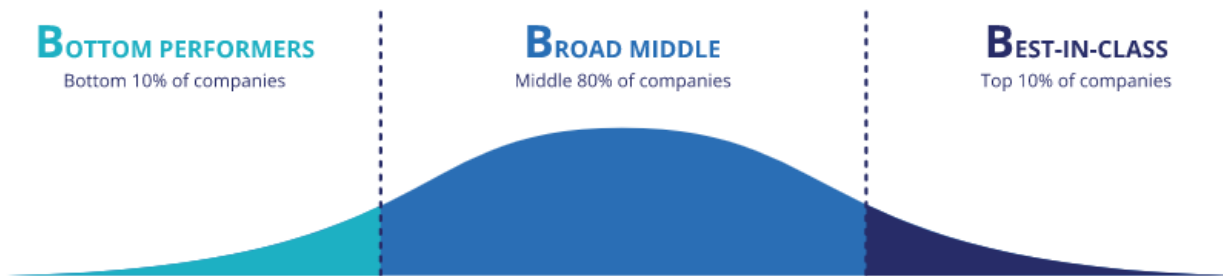
Tundra

Low maturity; Low Variance

3B Maturity Benchmark

A whole-of-manufacturing sector benchmark for companies

Reference points of what it means for a factory or plant to be Best-in-Class, in the Broad Middle, or lagging behind in the Bottom.



Industry Performance Cards (IPC)

Industry-specific benchmarks for companies

The *state of transformation can be highly industry-specific*, often influenced by factors like product nature/volume, complexity of manufacturing processes, and macro-level competitive dynamics.

The 14 Industry Groups



Aerospace



Automotive



Electronics



Energy & Chemicals
(Downstream)



Food &
Beverage



General
Manufacturing



Logistics



Oil & Gas
(Upstream)



Machinery &
Equipment



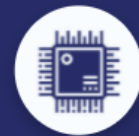
Medical
Technology



Pharmaceuticals



Precision
Parts



Semiconductors



Textile, Clothing,
Leather & Footwear

As industry-specific benchmarks, IPCs offer *a more apples-to-apples comparisons* for companies to assess how they fare against their industry peers.



WEF-EDB SIRI Internationalisation Partnership



The SIRI Internationalisation Program

Objective & Vision

Proliferate the global adoption of the SIRI as a single, internationally-recognised set of frameworks and tools that the manufacturing community use to evaluate and benchmark their manufacturing facilities

WORLD
ECONOMIC
FORUM

EDB
singapore



McKinsey
& Company



SIEMENS

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| S/N | Key Milestones | Period |
|-----|---|-------------------|
| 1 | Train 75 of Certified SIRI Assessors (“CSA”) to provide Official SIRI Assessments to manufacturing companies from different industries and geographies | Q4 2020 – Q1 2021 |
| 3 | Engage manufacturing community leaders globally to encourage their network of companies to take up the Official SIRI Assessment (OSA). | Through 2021 |
| 4 | Conduct 500 – 750 new OSA globally | Through 2021 |
| 5 | Publish the findings of the SIRI Assessments the 2nd Manufacturing Transformation Insights Report at the 2022 WEF Annual Meeting. The whitepaper shall provide new insights relating to the digital transformation of manufacturing and reflect the updated i4.0 maturity benchmarks. | Q2 2022 |

Getting Involved with the WEF-EDB SIRI Initiative

Be a part of the SIRI Initiative

Catalyse the transformation of manufacturing

Manufacturing Companies



Take the Official SIRI Assessment (OSA)

- Evaluate the current state of your operations
- Identify high-impact areas for improvement
- Benchmark your results with industry peers

Governments & Business Associations



Characterise the transformation profile of your manufacturing community

- Share about SIRI with your network of stakeholders
- Encourage your partners and companies to take the OSA

Technology & Consultancy Firms



Join us as a partner; nominate experts to be qualified as Certified SIRI Assessors (CSA)

- Offer OSA to your clients to accelerate their transformation journey
- Contribute new insights towards the *Manufacturing Transformation Insights Report*



SMART INDUSTRY READINESS INDEX

Catalysing the Transformation of Manufacturing