MES & Industry
INTERNATIONAL SUMMIT 4.0
Connect for a smarter future
ALFÂNDEGA DO PORTO
PORTUGAL
SEPTEMBER 7–8
2023
Nick Leeder
Recognised Expert, World Economic Forum
One Step at a time
The route to profitable and sustainable transformation in manufacturing

NICK LEEDER

Smart Industry Readiness Index...

A route to profitable and sustainable transformation in manufacturing

MES & Industry 4.0 International Summit | 7th September 2023

A quick introduction

20+ years global industry experience in helping companies transform their operations in Engineering and Manufacturing

- Recognised expert by the **World Economic Forum** for Advanced Manufacturing and Digital Transformation. Member of the Advance Manufacturing and Value Chains Platform
- Bachelor of Engineering from Loughborough University and a Charted Engineer in the UK

LET'S CONNECT!

PHILIPS | Elekta | IBM | Deloitte. | dyson

accenture | SKF | ptc | konektio.

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Introducing the World Economic Forum's Advanced Manufacturing and Value Chain Platform

Over 150 organisations globally

… across 12 industry clusters, governments, academia and civil society

Driving impact and new collaborations

… helping address the "How To", strengthening industry peer communities and unlocking new collaborations

A unique space for leaders to shape the future

… of advanced manufacturing and value chains, creating shared value for companies, workers, society and the environment.

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There are six pillars of initiatives manufacturing leaders globally have agreed with the World Economic Forum

Technology Adoption

Workforce Engagement

Sustainable Production

Resilient Value Chains

Power of Data

Shared Value Creation

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There are six pillars of initiatives manufacturing leaders globally have agreed with the World Economic Forum

Technology Adoption

Enabling new opportunity

Resilient Value Chains

Power of Data

Workforce Engagement

Shared Value Creation

Sustainable Production

PRINT VERSION

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When it comes to Industry 4.0 we are faced with a paradox…

KEEPING OPERATIONS RUNNING

Out of 400 manufacturers surveyed by McKinsey Industry 4.0 was sighted as being critical to keeping the operations running

… AND YET…

CAUGHT IN THE PILOT TRAP

Which is up from 70% in 2017… Meaning most organisations are struggling to get value from their Industry 4.0 investments

Source: Industry 4.0 adoption with the right focus, McKinsey, October 2021.

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Historically the focus has been on the technology rather than the the business value

TECHNOLOGY VIEW

… SHIFT THE BALANCE…

USE CASE VIEW

Adoption rate of surveyed Industry 4.0 technologies are fully rolled out or used extensively at manufactures today

Adoption rate of surveyed Industry 4.0 use cases are fully rolled out or used extensively at manufactures today

Source: IoT Analytics “Industry 4.0 Adoption Report 2020”

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So where do you start when thinking about future technologies in manufacturing?

Trying to understand ***digital*** *for many people is like trying to* ***smell the colour 9***

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So where do you start when thinking about future technologies in manufacturing?

Could it make sense to challenge my I4.0 strategy?

Do I know my I4.0 maturity?

Wouldn't it be great to compare my I4.0 maturity with other competitors?

Do I know which I4.0 dimensions are relevant and where I should focus on?

SMART INDUSTRY READINESS INDEX

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WORLD ECONOMIC FORUM

PRINT VERSION

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Smart Industry Readiness Index (SIRI) provides manufacturers an I4.0 maturity status and focus areas for improvement

I4.0 FOCUS DIMENSIONS

… Providing a clear framework to understand a company's Industry 4.0 maturity level

INDUSTRY AND BEST-IN-CLASS BENCHMARKS

… to help customers guide and position themselves in their individual environment

FOCUS ON VALUE AND OUTCOMES

… to help customers prioritise their efforts and to create clear roadmaps to allocate limited resources

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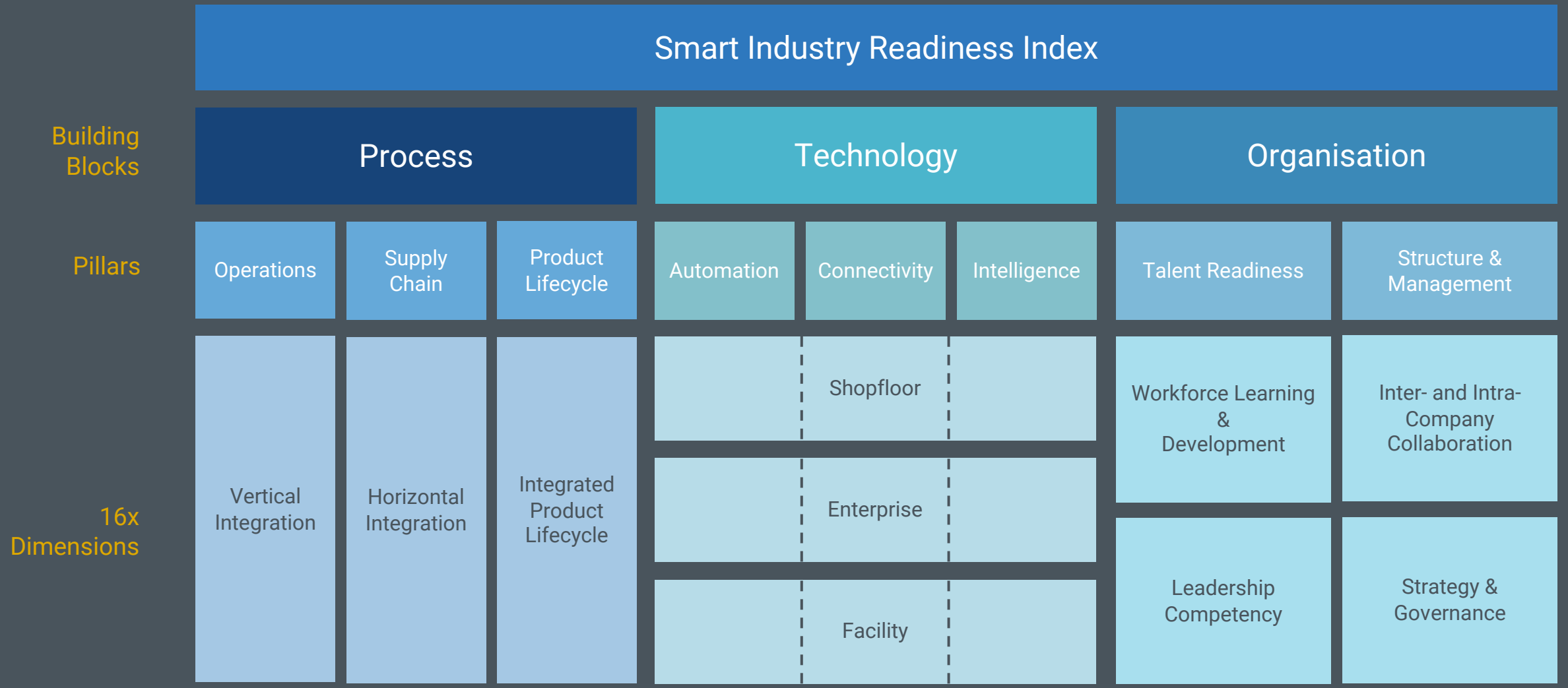
The Smart Industry Readiness Index SIRI is a structured and systematic way for manufacturer´s Industry 4.0 transformation



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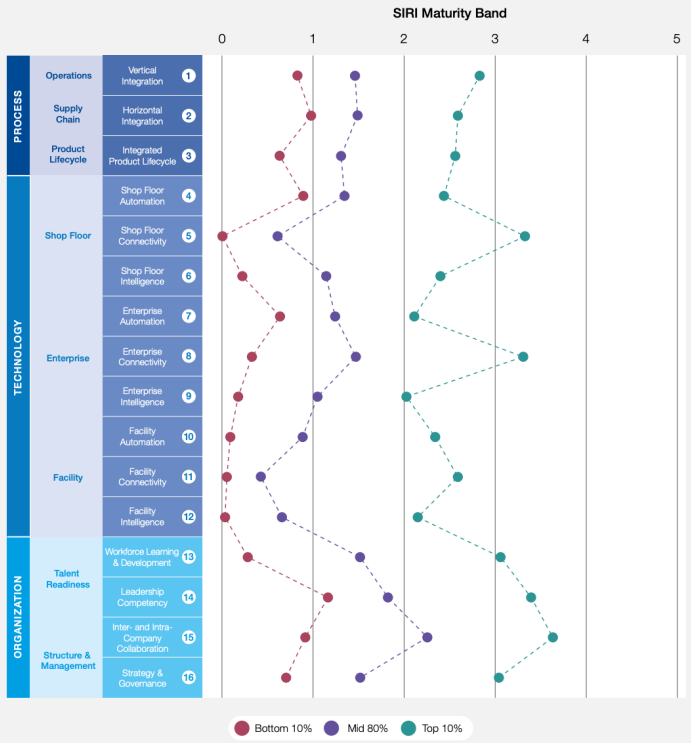
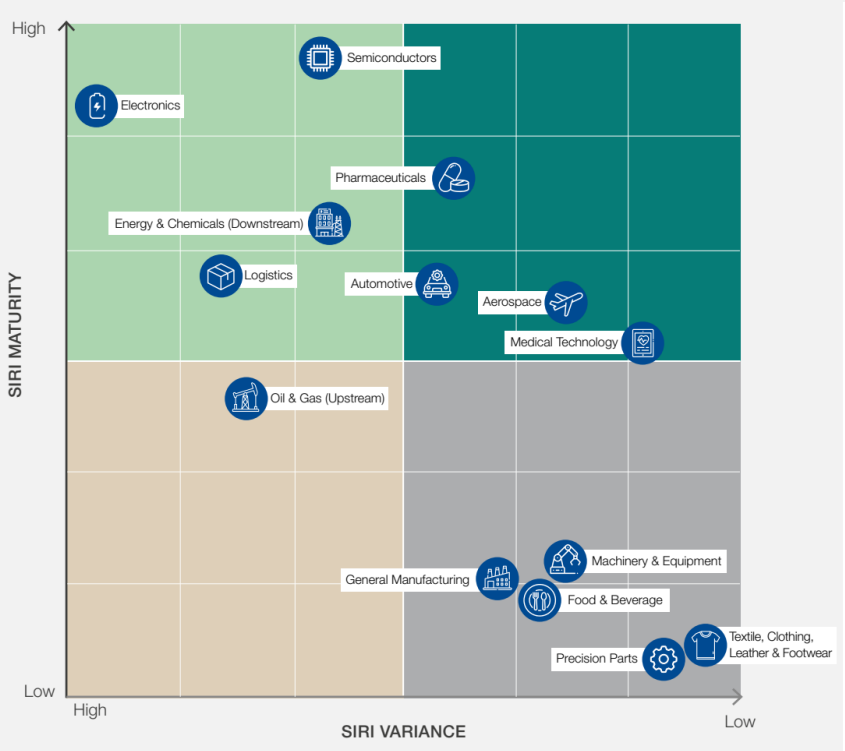
Smart Industry Readiness Index (SIRI) helps companies understand their readiness to transform

The SIRI maturity and the level of of adoption and variance differs greatly both in terms of industry and also between the leaders and the laggards





Source: The Global Smart Industry Readiness Index Initiative: Manufacturing Transformation Insights Report 2022, International Centre for Industrial Transformation (Analysis by the Singapore Economic Development Board), Feburary 2022

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The overall assessment & prioritization approach is conducted in one workshop

ASSESSMENT

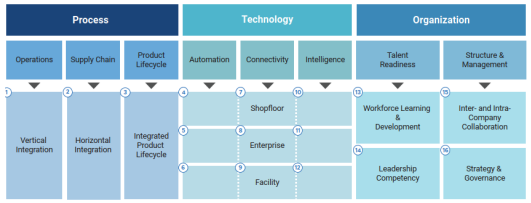
PRIORITISATION

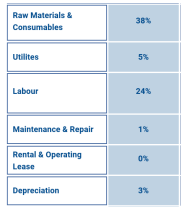
T Assessment Matrix Score

I Cost profile

E Key Performance Indicators

R Best-in-Class Benchmark





Step 1: Evaluate your current I4.0 maturity based on 16 standardized dimensions

Step 2: Define the cost drivers of your company

Step 3: Define important KPIs of your company

Step 4: Identify gaps to industry benchmark across 14 industries groups

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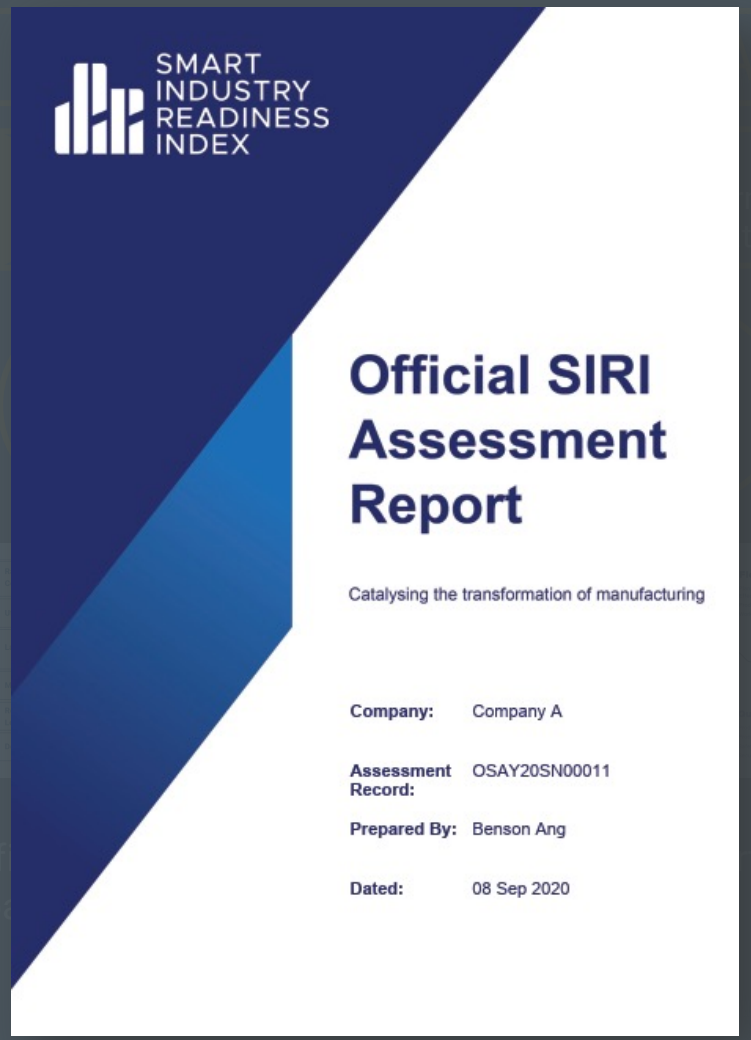
The overall assessment & prioritization approach is conducted in one workshop



RESULTS REPORT

- All assessed and **prioritized dimensions** (with scores)
- Top 4 individual I4.0 **focus dimensions to improve**
- Comments on **how to improve these dimensions**

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… Breaking the mold of these assessments is SPEED to complete the assessment!

Mgt. Alignment & Briefing Call

Planning, scheduling, participants identification

1h

1-2 Weeks
SIRI Information, Participant identification

SIRI Preparation Call

Team briefing & information, KPI / cost structure request

2h

< 1 Week
Data Gathering: KPIs and Cost Structure

SIRI Workshop

Conduct assessment (step 1) and prioritization (step 2-4)

1d

1-2 Weeks
Analysis and Report Generation

Debriefing

Presentation of results and definition of next steps

2h

Typical duration of the assessment is approx. 6 weeks

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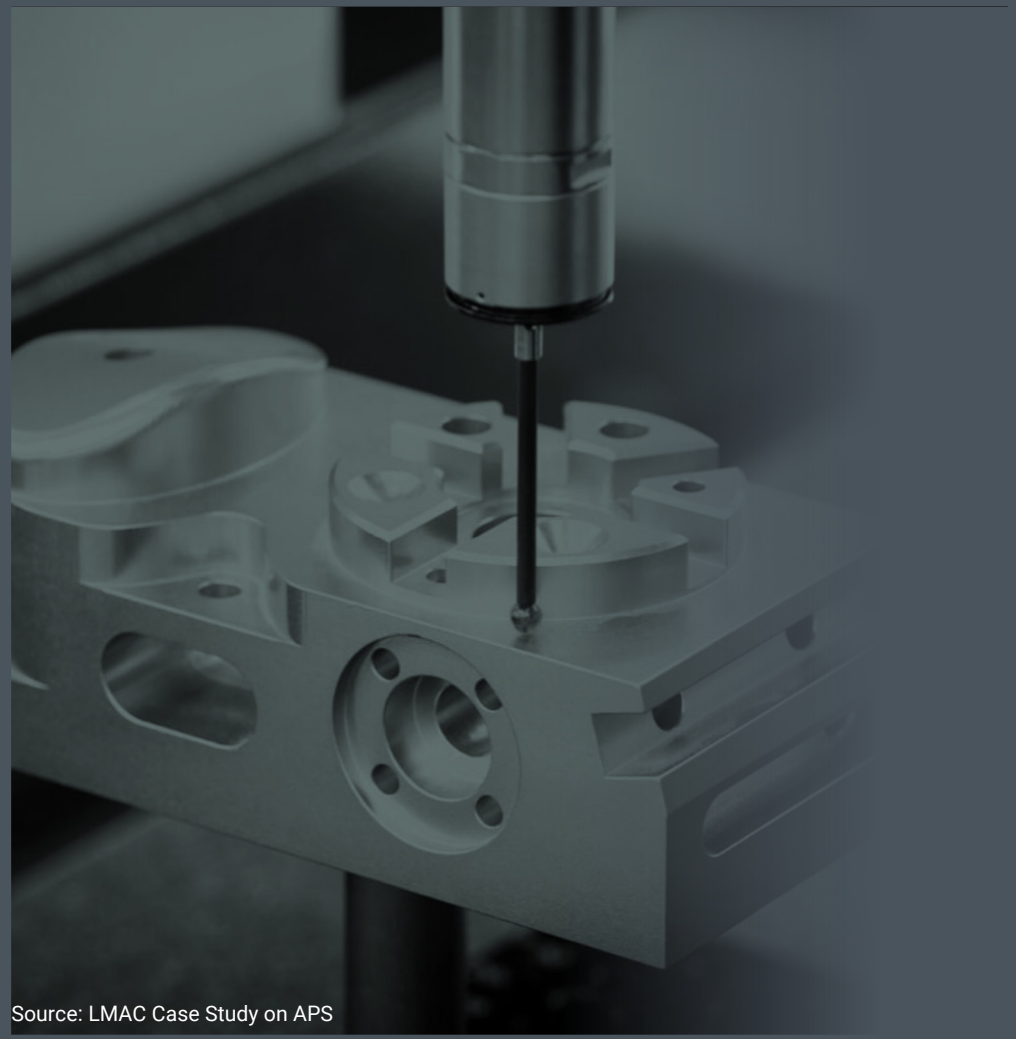
SIRI Case Study: Growth & Scale


Source: LMAC Case Study on APS

The Problem

Investing in the right technology to help a Precision Engineering manufacturing company grow and scale. They needed to deliver right first time, and on time.

The Key Challenges:

- On Time In Full (OTIF) dropped to 71 %
- Fire fighting to try and satisfy customers
- Struggling to balance a complex mix of work across 4 sites

The Solution

Completed a SIRI Assessment that prioritised:

- Identified Advanced Planning & Scheduling (APS) software as the priority solution to solve the immediate issue with OTIF
- Scoped and implemented APS alongside solution provider
- Project and change management to deliver results

The Results

- **OTIF increased to 85%** in the first month after implementation, trending towards the target of 95%
- **Identified additional capacity of 15 %** across the business through more effective planning of resources
- Moving onto the next priority of **automation and implementation of a Manufacturing Execution System** to digitise the information flow

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So how ready are you for Industry 4.0?

WE STILL HAVE SOME WAY TO GO…

The average SIRI rating shows globally companies are moving from defining their transformation into the first stages of digital maturity

THE BENFITS OF… SMART INDUSTRY READINESS INDEX

Holistic View
Digital maturity assessment across Process, Technology and Organisation

Quick and easy
Assessment is quick and easy, without the need to share sensitive data

Increases awareness
Improves understanding of technology and its benefits to manufacturing

Compare maturity
Benchmark I4.0 maturity across sites and against peers

Prioritise efforts
Enables creation of roadmap and better allocation of resources

Track progress
Able to run in recurring way to track transformation progress

Source: XIRI – Analytics Portal, Precision Engineering company, The aggregated result is on world level (12 industry clusters and 59 industry sub-segments), 2023 | 5 bands of SIRI are (0) Undefined, (1) Defined, (2) Digital, (3) Integrated, (4) Automated, (5) Intelligent

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FIND OUT MORE

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DOWNLOAD SIRI REPORT

Visit us at nickleeder.com
Email us at TalkToUs@nickleeder.com

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