

INSPIRING

Great British Manufacturing

Supply Chain: Business Not As Usual

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Your presenters



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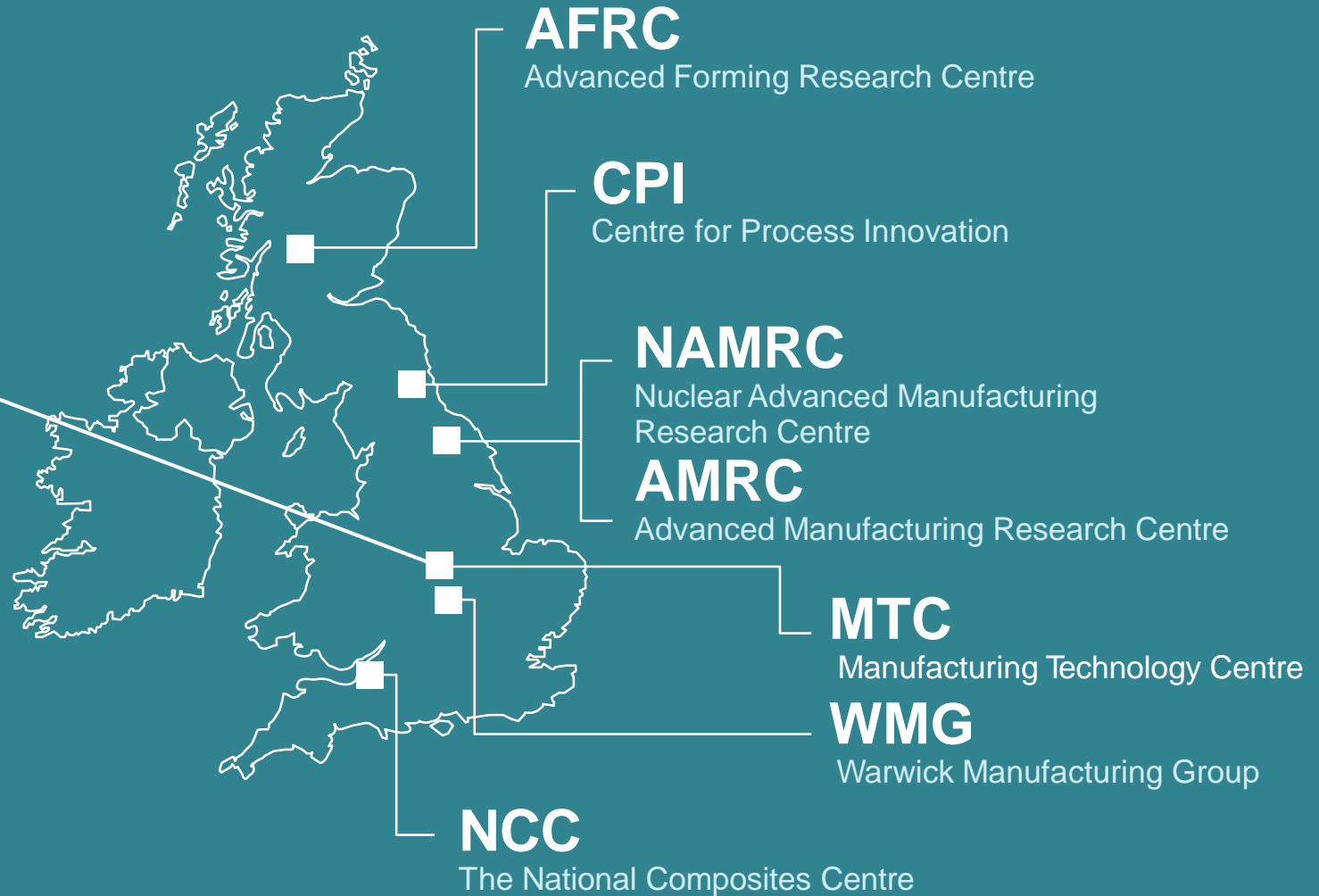
- **Who are the MTC?**
- **How will you and your supply chain change?**
 - How can you reduce vulnerability of your business?
....either as a purchaser or as a supplier
 - Tips & hints to assess risks and develop recovery strategies
- **Supply Chain Readiness Level Assessment methodology**
 - Case study
- **Q&A**



HIGH VALUE MANUFACTURING CATAPULT

mtc | Manufacturing Support Services

- 800 employees
- Assist with improving quality, cost and delivery performance
- We identify new technologies and de-risk investments
- We provide expert technical capabilities and advice using our extensive engineering team and cutting edge workshop

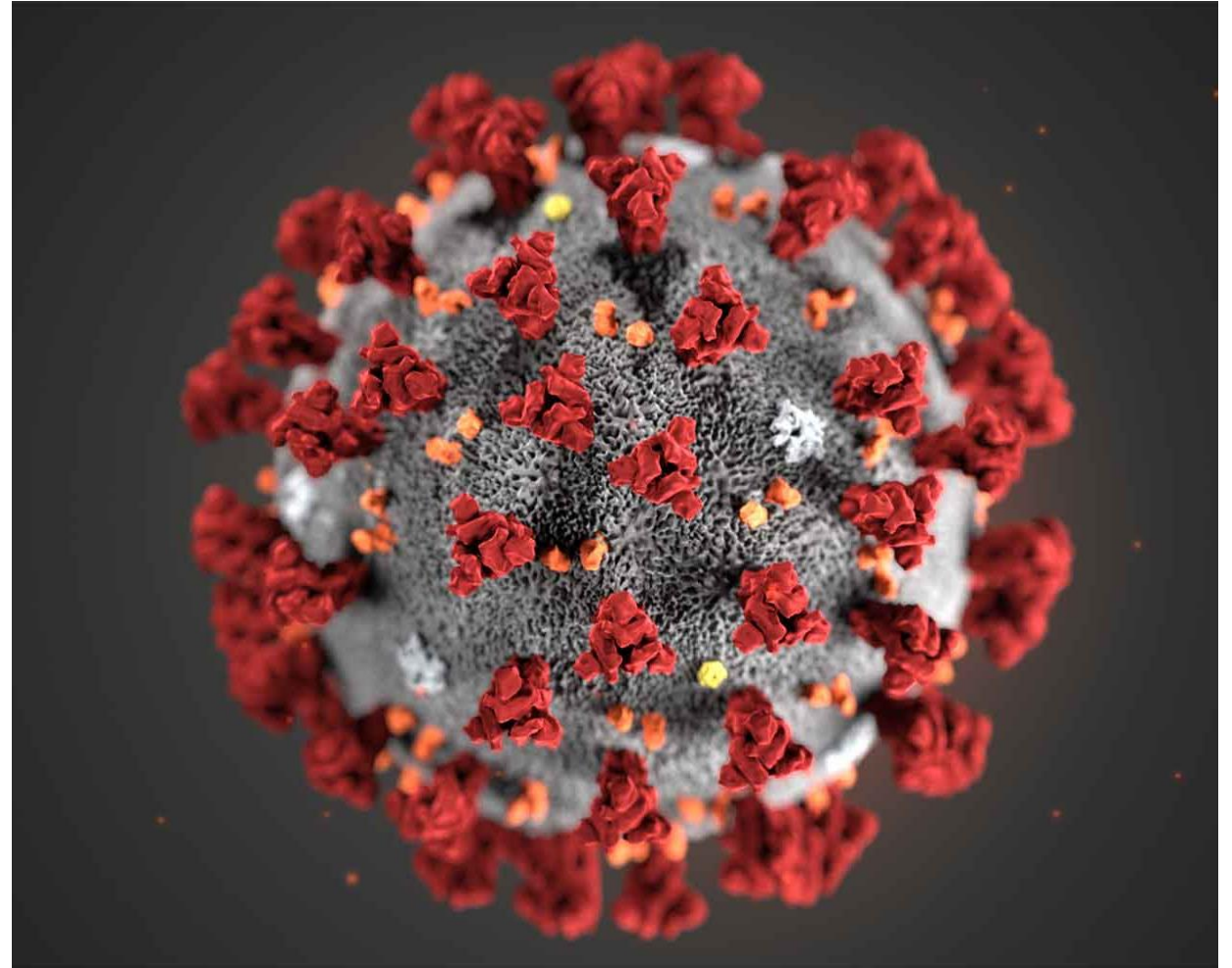




How will you and your supply chain
change?

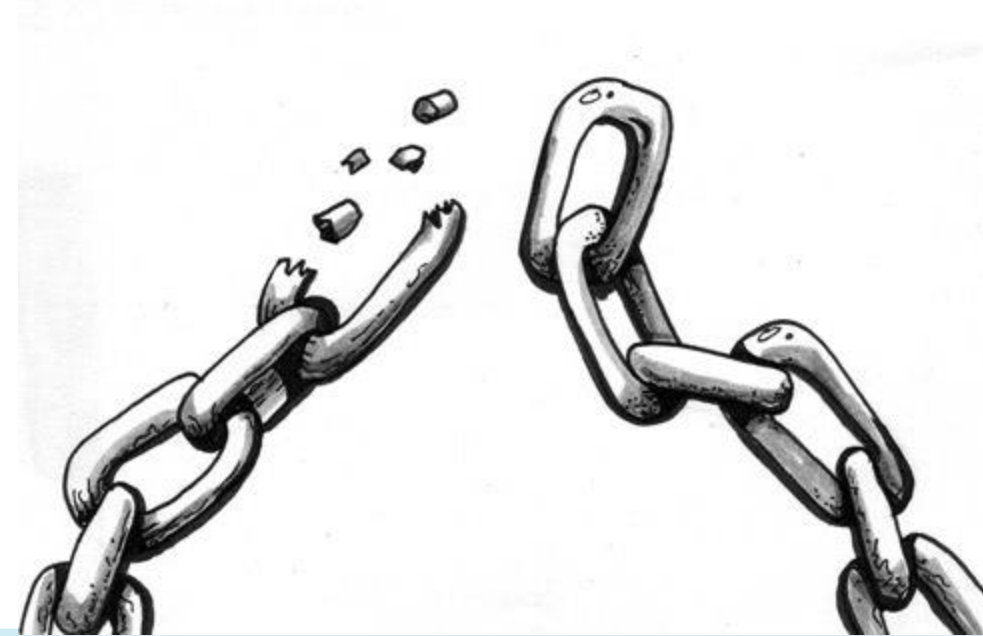
Is this just Covid-19?

- 2001 9/11 – air industry severely affected, bank call in short term finance, delays in new part introductions
- 2005 Hurricane Katrina - New Orleans 80% flooded
- 2007 REACH – new regulation of chemicals on human health and the environment
- 2007/8 Financial crisis - banks crash all industries affected and reduced consumer spending
- 2010 Eyjafjallajökull volcanic eruption – air travel suspended
- 2011 Tōhoku earthquake and tsunami - Japanese factories close, particularly automotive electronics
- 2015 Paris climate change agreement – legal agreements to reduce carbon
- 2016 Brexit - trade agreement and immigration
- 2019 Bush fires – South East Australia

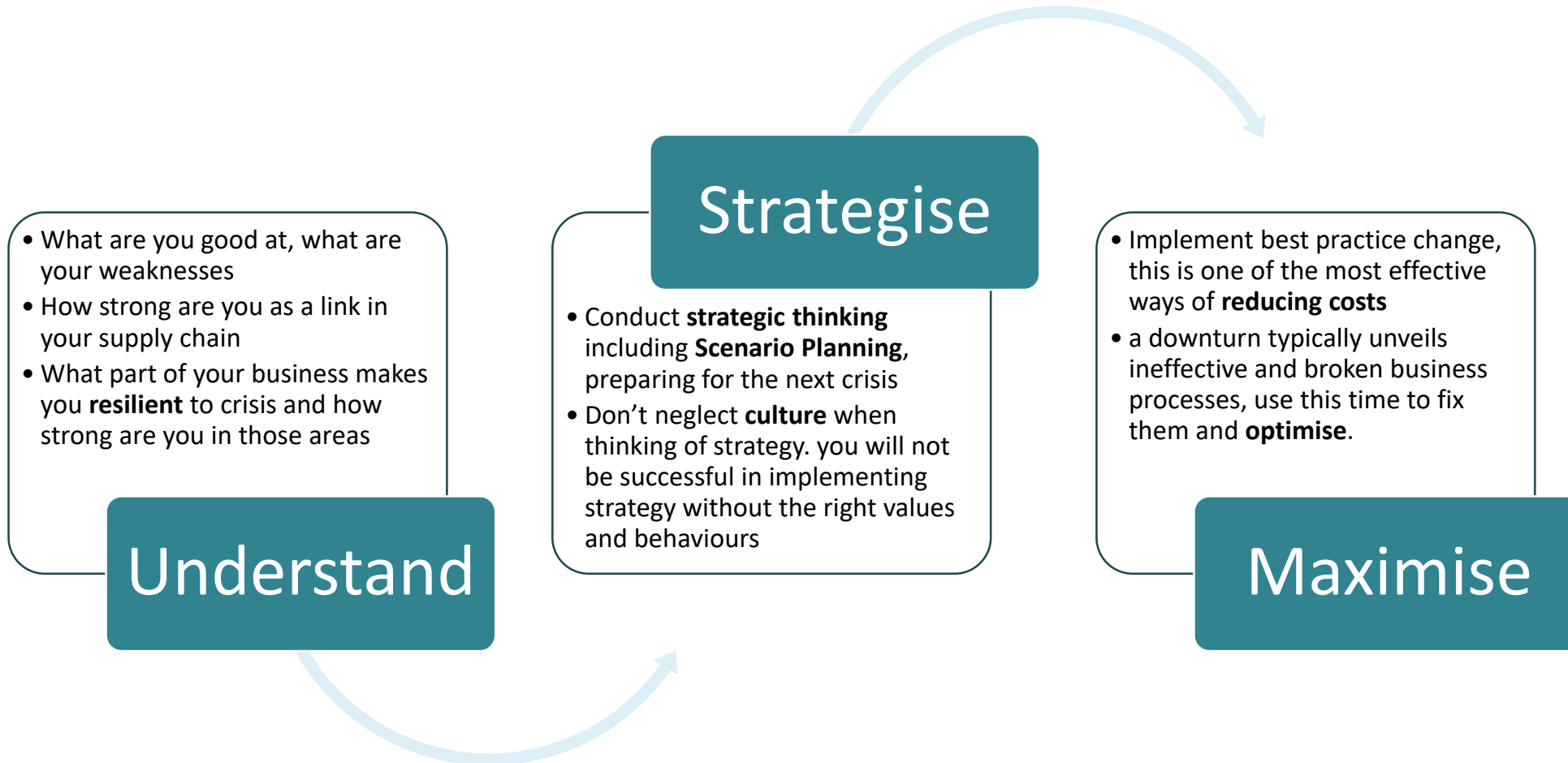


Why Change?

- Simply put those who do not adapt to the new environment may not survive.
- You are only as strong as your supply chain, if one link fails you will fail
- Things that made you successful as a supplier in the past may not be what is needed now.
- Increase in opportunities for those who can adapt quickly to support reshoring and on shoring



3 Key Steps to take



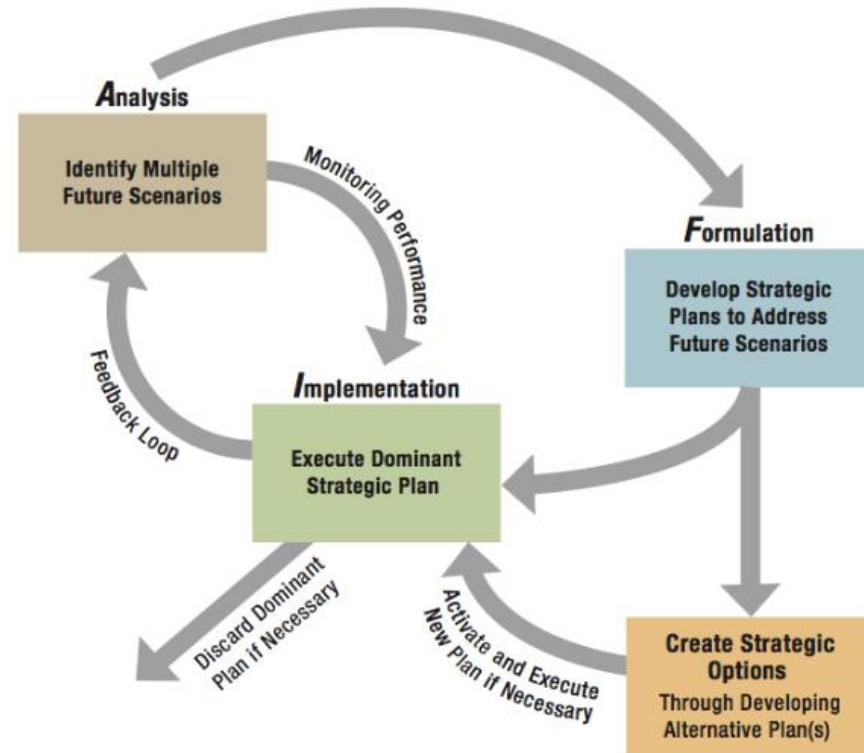
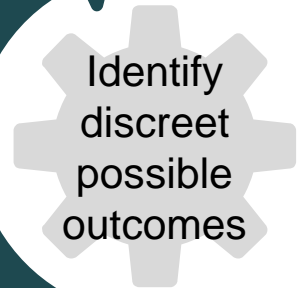
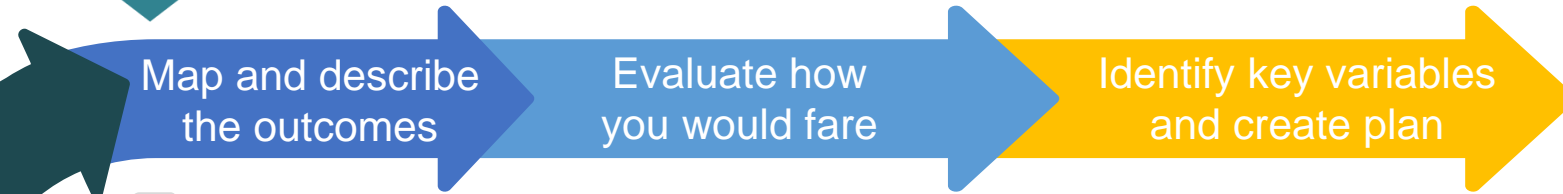
These steps are needed for individual companies and supply chains as a whole.

If you are a supplier don't wait for the OEM to tell you what to do.

If you are the OEM don't wait hoping everything will be alright with your supply chain

Future Crisis Preparation

Scenario Analysis



Scenario Analysis is a tool to help you to anticipate and thus prepare for multiple different futures

- Use plausible yet distinct possibilities
- Can be high cost in time but high reward
- The more scenarios covered the more likely you will predict the next crisis
- Needs a method of assessing which scenario is most likely
- Strategy plans don't necessary need to be implemented but the trigger that indicate a scenario is likely to happen need to be known and measured



Supply Chain Assessment

How the MTC can assess your supply chain

Cy Keogh
Senior Advisor – Business Transformation

Robustness and Resilience

What is the difference

Robustness vs. Resilience

Robustness

- How much can you take before you fall down



Resilience

- How long does it take you to stand up again



#RIP_Muhammad_Ali
(1941 - 2016)

Robustness and Resilience

What is the difference


- **Robustness:** Robust systems can continue functioning in the presence of internal and external challenges **without fundamental changes to the original system**
- **Resilience:** Resilient systems adapt to internal and external challenges by **changing their method of operations while continuing to function**. Whilst elements of the original system may remain, there is a fundamental shift in core activities that reflects the system's ability to adapt to the new environment

The Resilience Framework

Tom Pettit - 2008

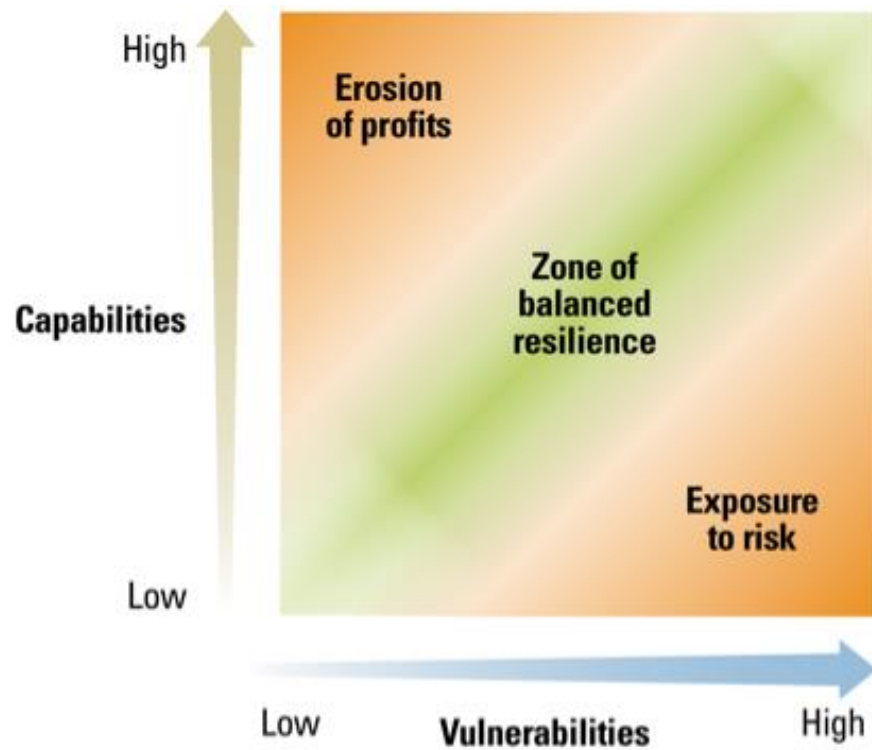


Resilience is therefore

- A balance between external disruptive forces that create vulnerabilities in an organisation, and
- 
- The degree to which an organisation has developed the capabilities to adapt its behaviour to meet the current challenges.

The Zone of Balanced Resilience

An appropriate response is called for



FINDING THE ZONE OF BALANCED RESILIENCE

As vulnerabilities increase, companies may be exposed to undue risks and need to improve their corresponding capabilities. However, overinvestment in capabilities can erode profits, so companies need to find the zone of balanced resilience where their portfolio of capabilities is matched to their pattern of vulnerabilities.

Supply Chain Expertise



Supply Chain Readiness Assessment (SCRA)

The Digital Tool also provides an measure of Supply Chain Resilience



The Digital Assessment Tool
Results are mapped against a broad range of company data to identify critical links

SUPPLY CHAIN READINESS ASSESSMENT

5/5	Innovation & Technical Mastery	Are we using innovation & new technology in our processes?	C&F
5/5	New Product Introduction (NPI)	Are we using innovation & new technology in our products?	C&F
5/5	Supplier Relationship towards its Customers	Do we have a systematic approach to technology introduction?	C&F
		Are we building strong technology collaborations and networks?	C&F
			C&F

SUPPLY CHAIN READINESS ASSESSMENT

Current State | **Are we using innovation & new technology in our processes?** | Future State

- Little use of new technology in the manufacturing processes
- New technology used in some manufacturing processes
- New technologies in numerous manufacturing processes
- New technology integral to process development

Briefing | Comments

How innovative are we as a company? Is innovation present in our processes and products? Do we have a well proven technology adoption roadmap? Can we demonstrate examples of adoption of new technologies.

- Developed from MTC SCRL
- Principally Sector Agnostic
- Sector-Specific “cassette”
- 45 Sub-threads x 4 Levels of Maturity
- 180 points of reference

The MTC Supply Chain Readiness Assessment (SCRA). Together we impact society.

The **RIGHT** Way

SCRA provides a measure of nine critical capabilities

Thread	
1	Innovation & Technical Mastery
2	New Product Introduction (NPI)
3	Supplier Relationship Towards the Customer
4	Contract Management, Risk Management, & Security
5	Sustainability of Supply
6	Synchronisation of Supply
7	Supply Chain Organisation & Governance
8	Agility & Transformation
9	Digital Competence

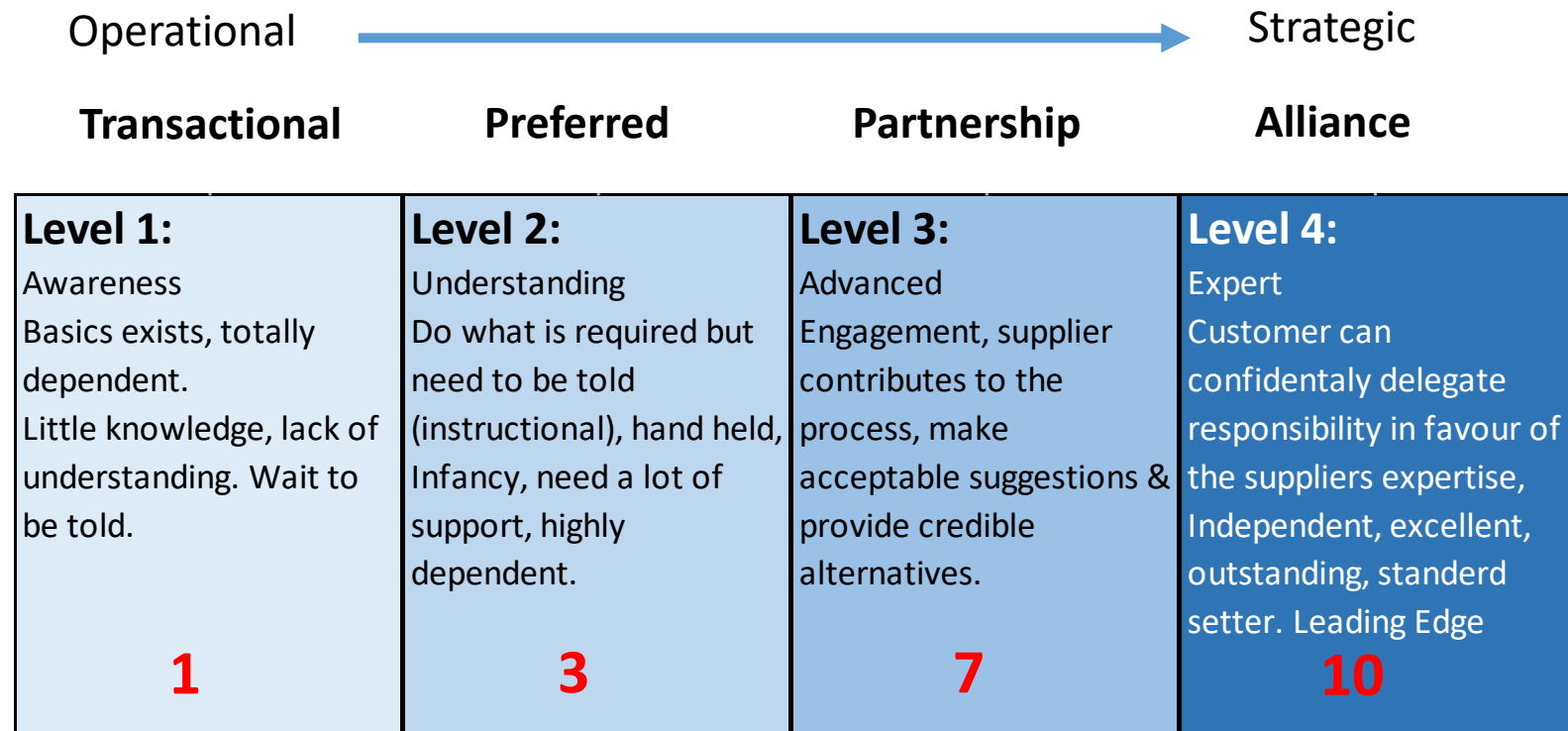
Sub-Thread Questions
Are we using innovation & new technology in our processes?
Are we using innovation & new technology in our products?
Have we got a systematic approach to technology introduction?
Are we building strong technology collaborations and networks?
How are we using data to support innovation?

5 sub threads for each main thread

9 X 5 = 45
Questions in
the assessment

9 main Themes or Threads

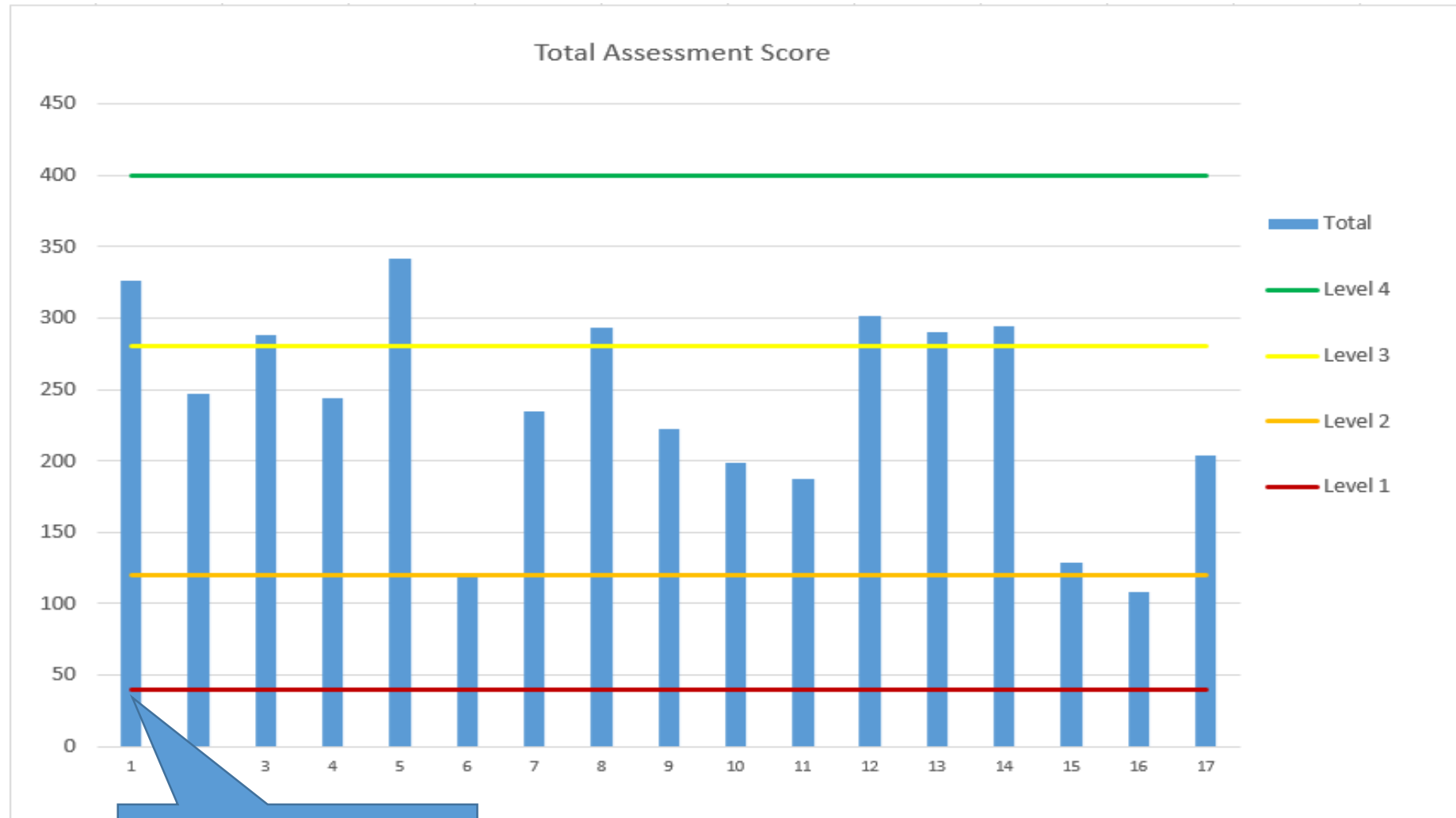
Introduction to the MTC Resilience Assessment Methodology – The 4 Levels of Maturity



160 – 180 (4 x 40) points of reference as a measure of capability

Assessment Results 1

Analysis: - Overall Score by Supplier

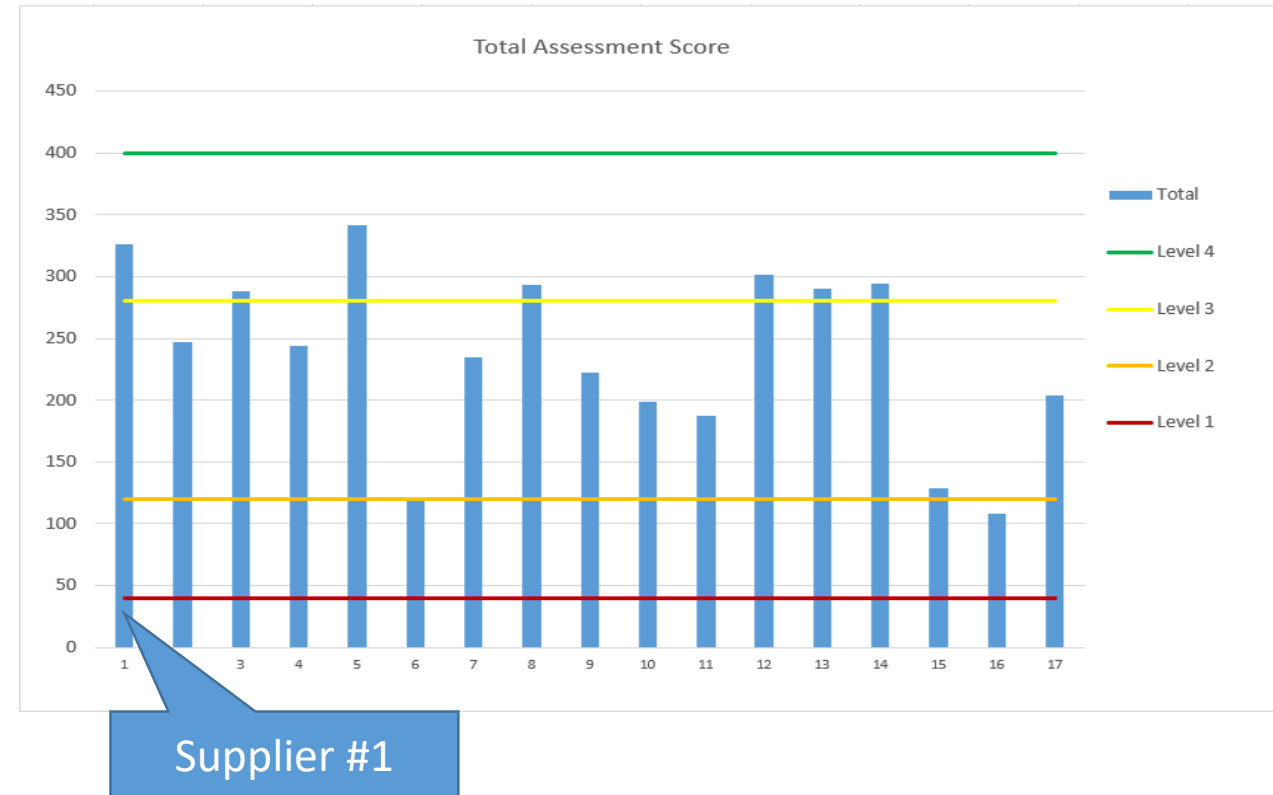


Supplier #1

Assessment Results 1

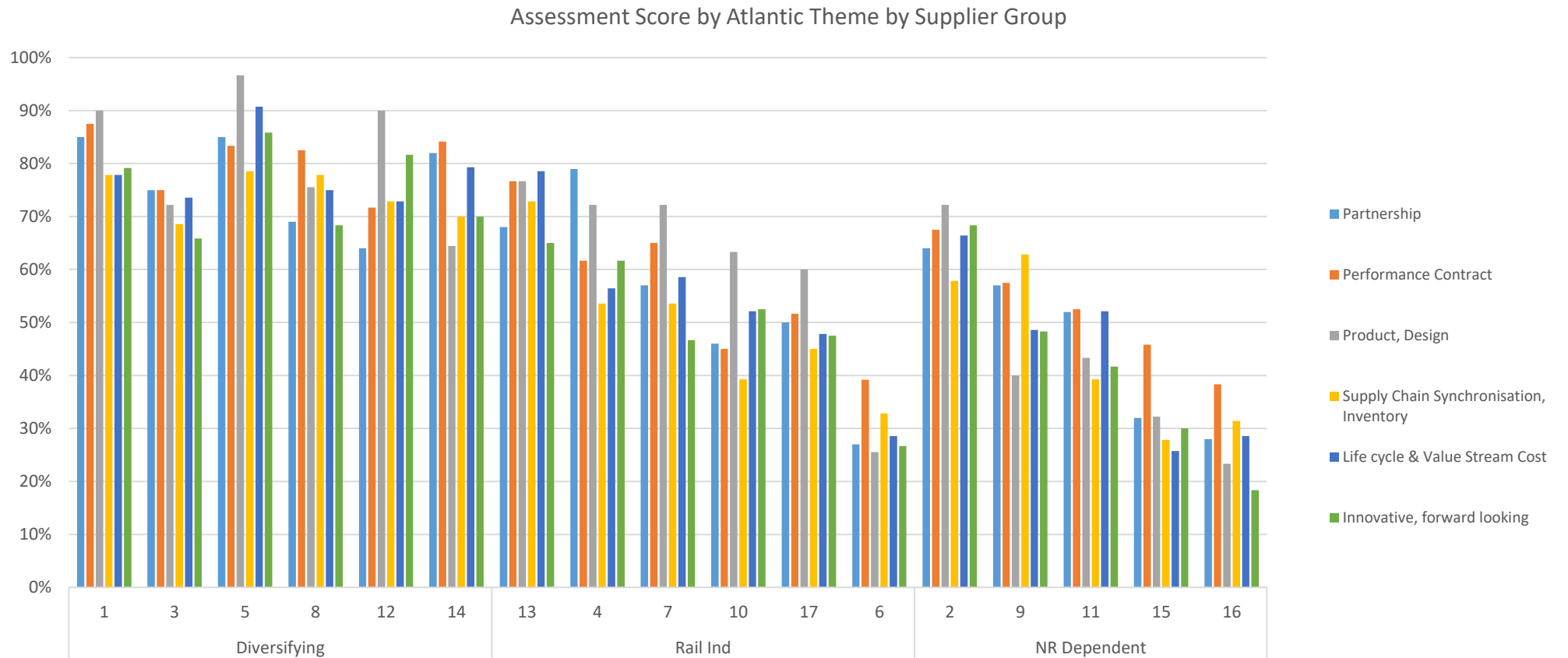
Analysis: - Overall Score by Supplier

1. **Score and range vary significantly.**
2. **No supplier at level 4.** No trend-setter or role model.
3. **Most suppliers above level 2;**
4. **An understanding of the minimum requirements of capability.** Some have a way to go.
5. **3 suppliers at level 2 or below**
Support needed to reach a sustainable level of supply capability. Foundation Programme?
6. **Attaining Level 3 could be objective of Supplier Development Programme**



Assessment Results 4

Analysis: - Score of Project Atlantic themes by Supplier Group



Diversified

Rail Sector

Dependent

Results – Deep Dive

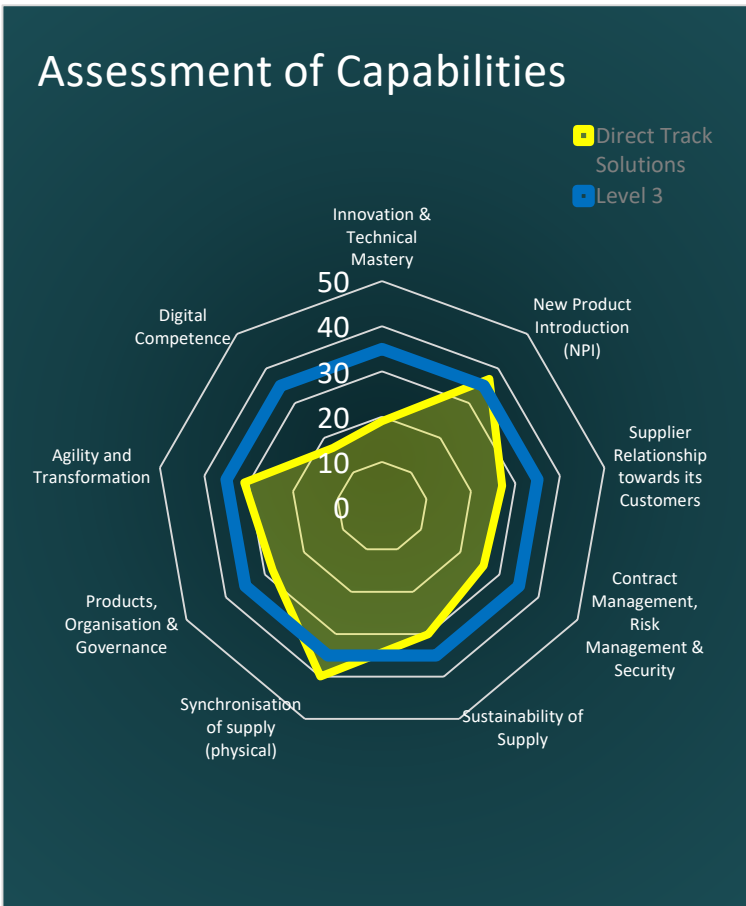
Areas for major concern level 1 & 2

Theme	Sub thread	No. of Level 1 Scores	No. of Level 2 Scores	No. of Level 3 Scores	No. of Level 4 Scores	Total
7Sustainability of Supply	Are we exposed to critical suppliers (e.g. materials, sub-assemblies, components, etc.)?	0	11	3	3	17
10Supply Chain Organisation & Governance	Fit in supply chain, business intelligence and control of their value stream (e.g. cost & waste management)	9	3	4	1	17
11Agility & Transformation	To What extent are we Industry 4.0 ready? What plans have we in place to future-proof our business?	7	9	0	1	17

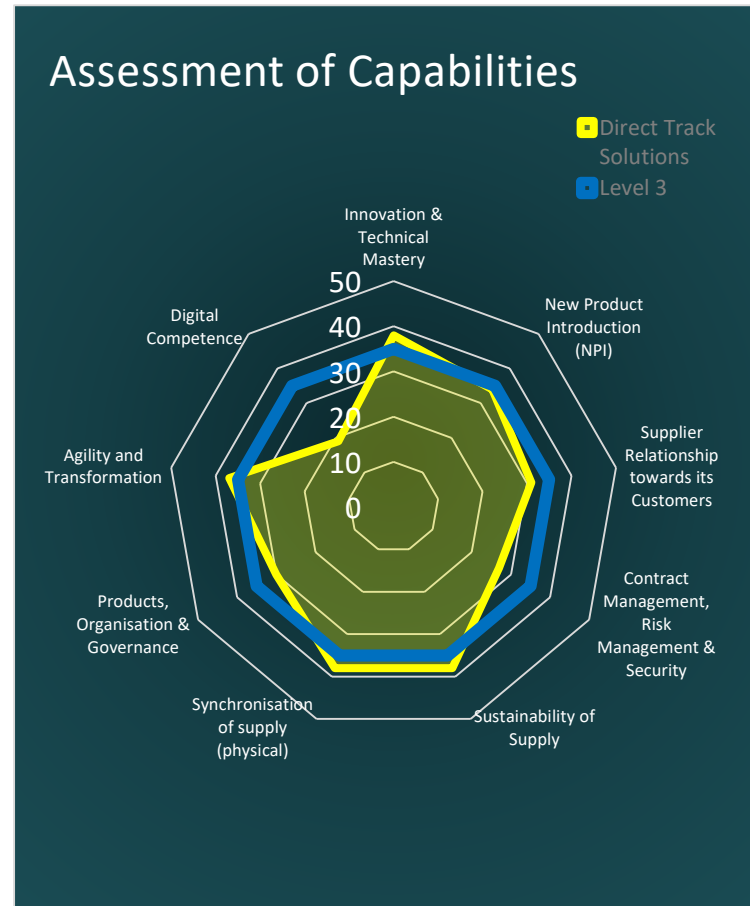
Phase 2 – Foundation Programme

Supplier Capability Assessment

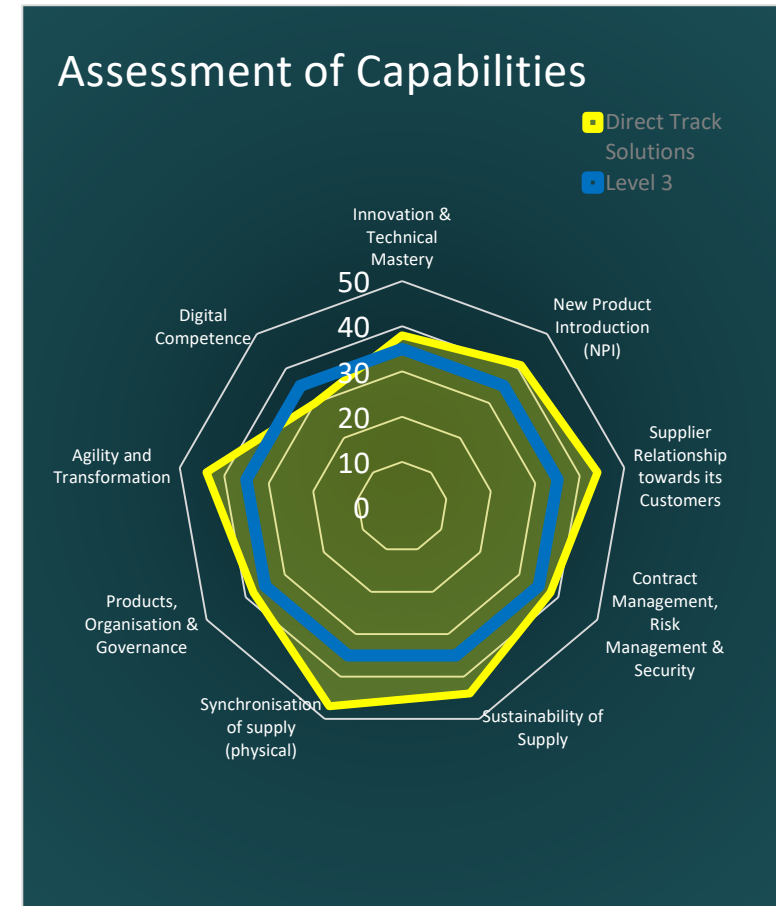
Past State



Current State



Future State



Supplier Resilience Assessment

Resilience Factors

Diversified

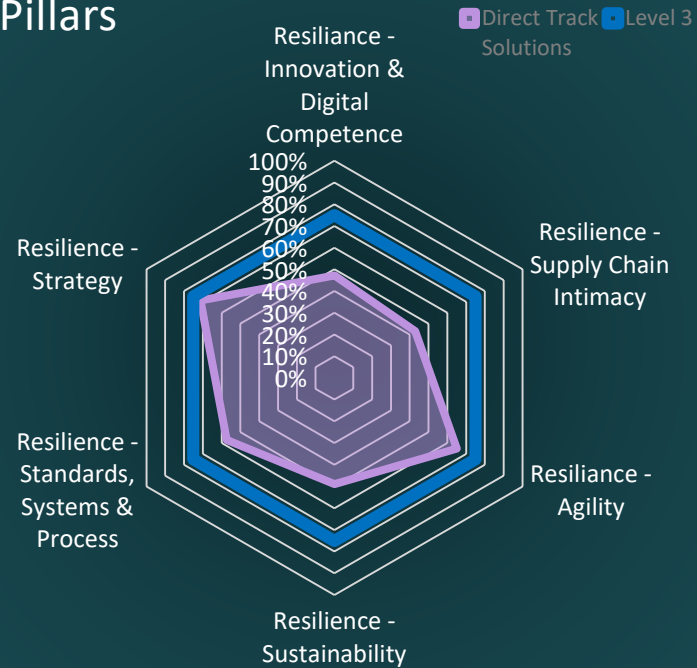
1. Digital Competence and innovation
2. Strategy
3. Supplier intimacy
4. Sustainability
5. Agility
6. Systems, Standards & Procedures

Supplier Capability Assessment

Resilience assessment

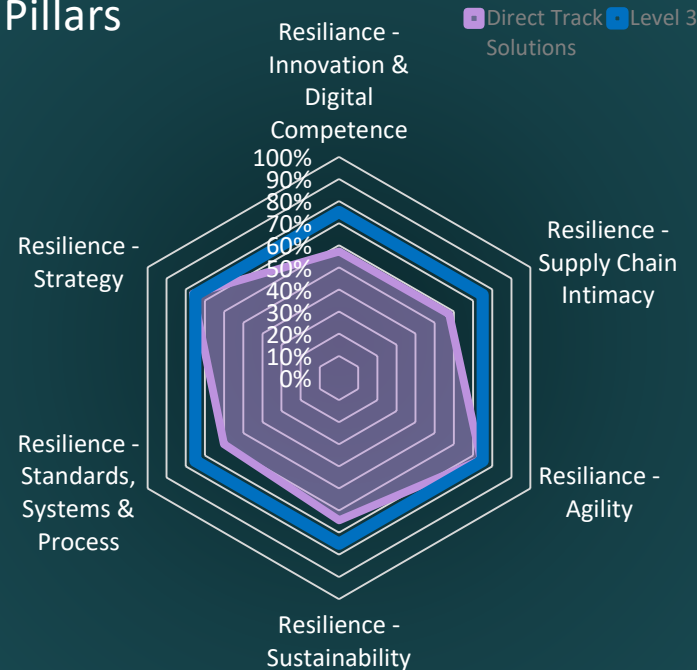
Past State

Assessment of Resilience Pillars



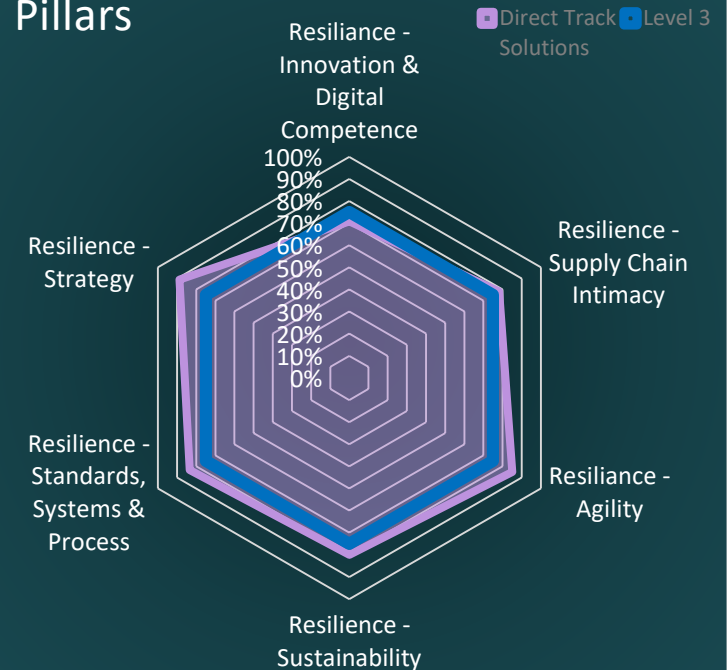
Current State

Assessment of Resilience Pillars



Future State

Assessment of Resilience Pillars



Supplier Resilience Assessment

Supplier #2

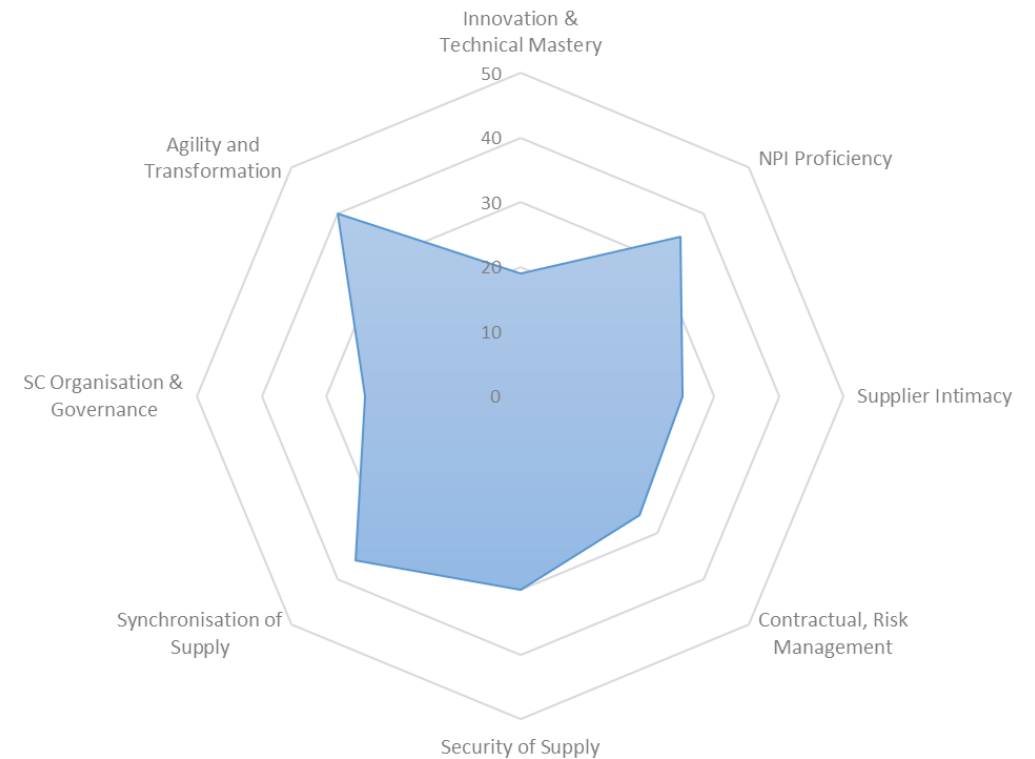
Rail Industry

- Customer Sectors: Mostly Rail
- Special Processes & Services:
- Capacity, Utilisation:
- Main Suppliers:
- Other comments: Small company focused on pads but recent expansion into machines parts

Resilience Quotient: **57%**

Resilience - Low /Robustness – Medium

Assessment of Capabilities:



- Know what you are good at: which part of our business, including its supply chain, is already resilient? – use **Value Chain Analysis**.
- Use tools such as **Scenario Planning** to upgrade your strategy, to help identify potential risks and opportunities.
- Determine your '**Zone of balanced resilience**' where your portfolio of capabilities is matched to the pattern of vulnerabilities, putting you in the most agile and suitable position.
- Employ a **systematic approach** to assessing the management and effectiveness of your supply chain.
- Don't depend on your supplier, or wait for your customer to act – **take the initiative**.



Thank you for your time
Any Questions for the road ahead?

Together we impact society.
The **RIGHT** Way

If you are an
SME, you can
request a
remote
assessment of
your business
using the SCRL
tool free of
charge

For Internal Use Only

MTC Manufacturing Support Services



<https://vimeo.com/showcase/6136066/video/348589749>

Thank you for listening

If you would like to speak to a member of our team about this webinar or the services we offer to manufacturers, please email:

mss@the-mtc.org



Q&A