Cyflymydd Digidol S M A R T

S M A R T Digital Accelerator

Llywodraeth Cymru
Welsh Government
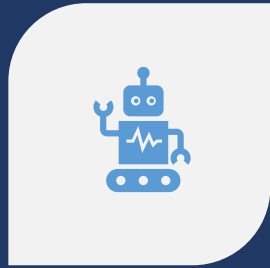
The University Of Sheffield. /AMRC Cymru

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Embedded Digitalisation

AI – MACHINE LEARNING
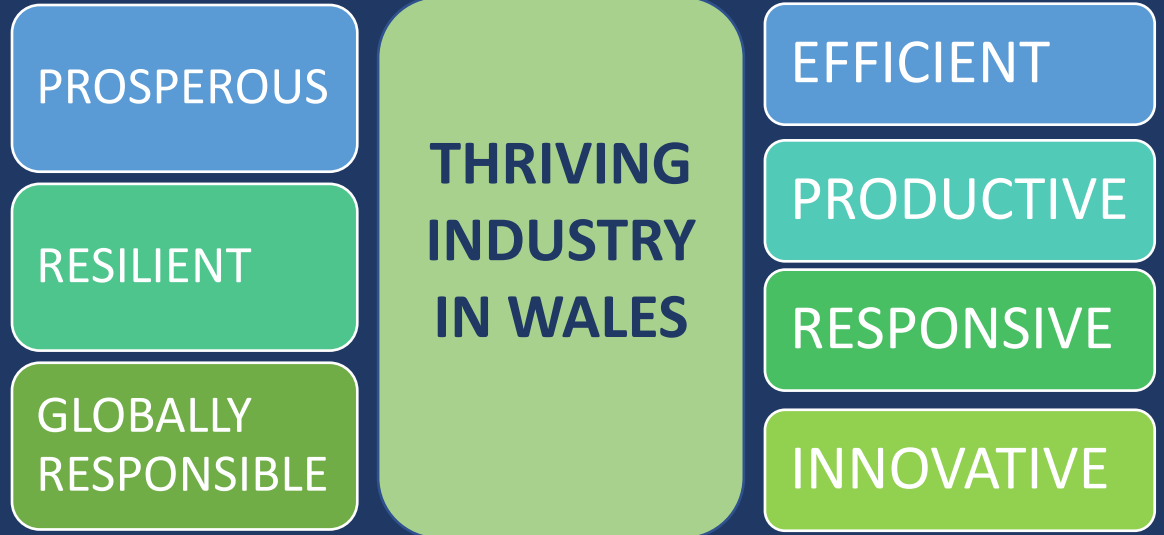
WIRELESS CONNECTIVITY

SMART / INTELLIGENT SYSTEMS

IMMERSIVE TECHNOLOGIES

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Wellbeing of Future Generations (Wales) Act

Globally Responsible

Prosperous

Resilient

Vibrant Culture and Thriving Welsh Language

Healthier

Cohesive Communities

More Equal

PROSPEROUS

RESILIENT

GLOBALLY RESPONSIBLE

THRIVING INDUSTRY IN WALES

EFFICIENT

PRODUCTIVE

RESPONSIVE

INNOVATIVE

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Matt Booth
Project Delivery Lead
AMRC-Cymru

Dr John R Thomas
Company Assessment
Team

Gary Evans
Company Assessment
Team

Christopher Wyatt
Company Assessment
Team & Digital Modelling

David Jones
Company Assessment
Team

Matthew Sims
Company Assessment
Team

Lynn Davies
Company Assessment
Team & Digital Dashboards

Laurence Wood
Company Assessment
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Carlene Campbell
Cyber Security
& Networking

Ryan Cording
Digital Twins
& DES & AR/VR

Simon Thomas
SMART Networking
Sensors and Security

Lucy Beddall
Project Marketing
Officer

Jordan Jenkins
AI, M/C Learning
Vision Sys & Automation

Bot=Hive

Majotech Ltd
PARTNERSHIP

POET
poetry in process ■

REECO
ROBOT AUTOMATION SOLUTIONS

PLATCON
Automation
& Electrical Design

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- Team of Expert Assessors and Advisors drawn from industry and academia

- Collaborative – working with (not for) organisations

- Business Diagnostic – Identifying where digital technologies can positively impact operations

- Focus on value to organisation and their customers

Project Partner – AMRC Cymru
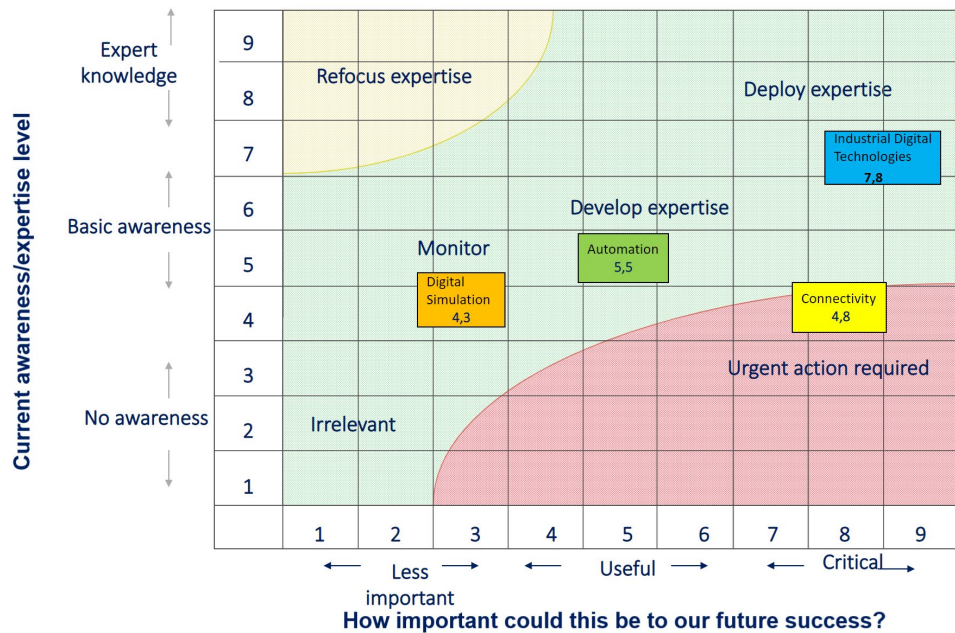
10 x Company Assessments

3 x Digital Technology Adoption

Support

SMART
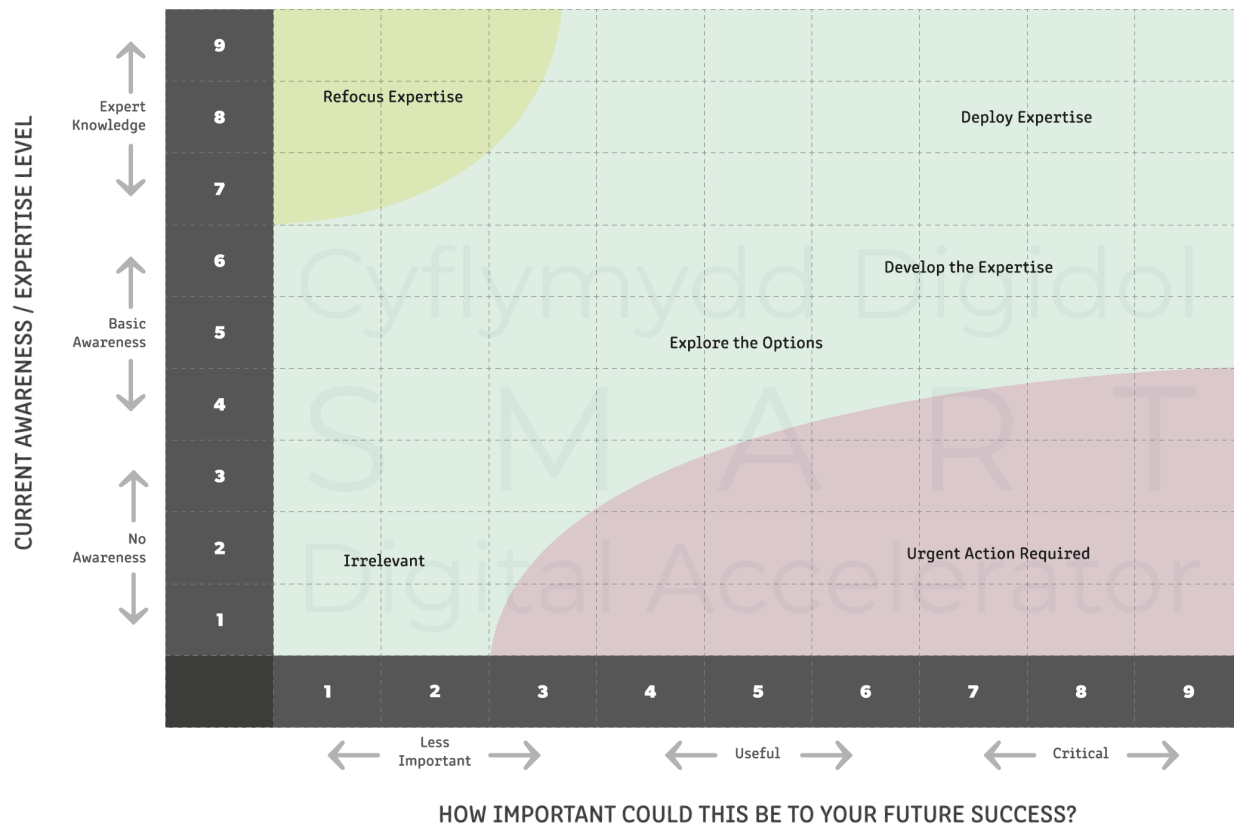Digital Accelerator

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Digital Accelerator

1. Understand operational challenges

2. Analyse and verify perceptions and assumptions

3. Identify and explore suitable digital technology solutions

4. Identify barriers to adoption

5. Develop a clear set of recommendations and support structures which will accelerate digital technology adoption.

Possible Digital Technology Adoption Support

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CURRENT AWARENESS / EXPERTISE LEVEL

Expert Knowledge

Basic Awareness

No Awareness

9	Refocus Expertise					Deploy Expertise		
8								
7								
6					Develop the Expertise			
5				Explore the Options				
4								
3								
2	Irrelevant					Urgent Action Required		
1								

1 2 3 4 5 6 7 8 9

← Less Important →   ← Useful →   ← Critical →

HOW IMPORTANT COULD THIS BE TO YOUR FUTURE SUCCESS?

DIGITAL SIMULATION

Digital Twinning
Augmented Reality (AR)
Virtual Reality (VR)

AUTOMATION

Robots
Cobots
EMC

DATA COLLECTION & PROCESSING

Artificial Intelligence (AI)
Big Data

CONNECTIVITY

5G
LPWAN

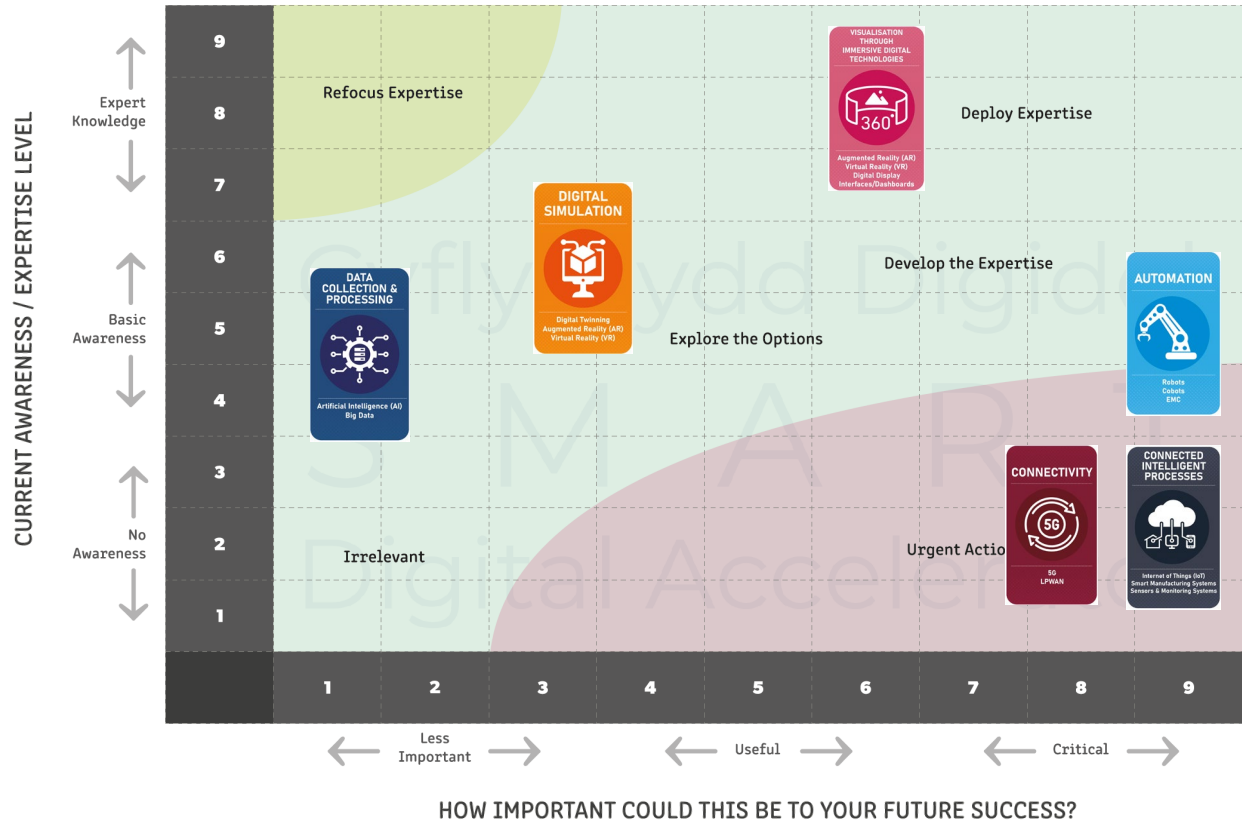## VISUALISATION THROUGH IMMERSIVE DIGITAL TECHNOLOGIES

Augmented Reality (AR)
Virtual Reality (VR)
Digital Display Interfaces/Dashboards

CONNECTED INTELLIGENT PROCESSES

Internet of Things (IoT)
Smart Manufacturing Systems
Sensors & Monitoring Systems

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DIGITAL SIMULATION

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Where are you now?

SMART Digital Accelerator Diagnostic

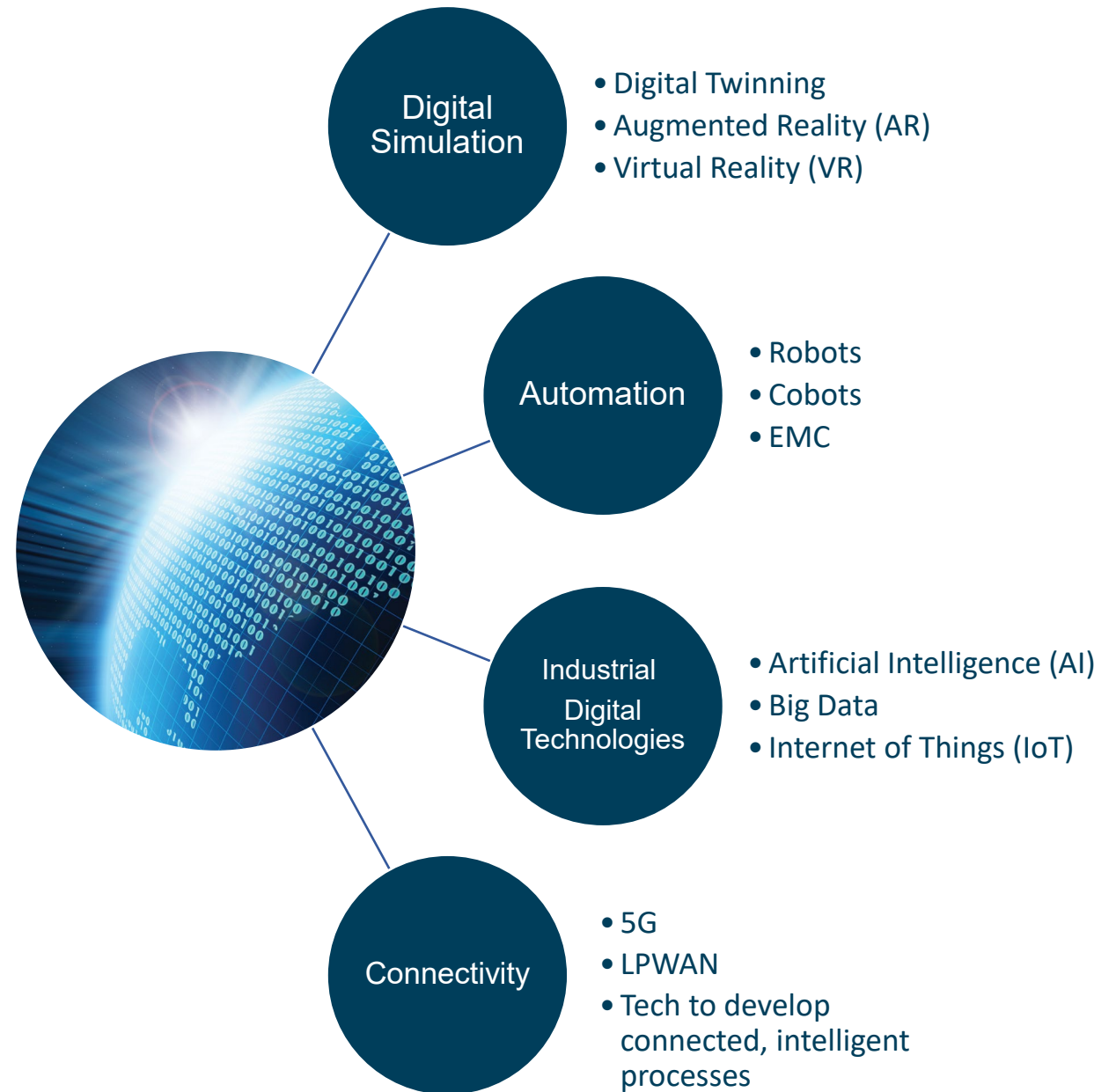| Organisation		Process		Technology					
People and Change Management	Structure Management	Operations & Supply Chain	Product lifecycle	Automation	Digital Simulation	Data Collection and Processing	Visualisation through Immersive Digital Technologies	Connected Intelligence	Connectivity
1 Staff Development	3 Inter- and Intra-Company Collaboration	5 Integrated Operations & Supply Chain	6 Integrated Product Lifecycle	7 Production	10	13	16	19	22
				8 Business Operations	11	14	17	20	23
2 Leadership Competency	4 Strategy & Governance			9 Site Infrastructure	12	15	18	21	24

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How can Digital Technology help you get there?

- Possible "technology stacks"

- Appropriate solutions

- System Integration

- Scalable

- Holistic approach

Digital Simulation
- Digital Twinning
- Augmented Reality (AR)
- Virtual Reality (VR)

Automation
- Robots
- Cobots
- EMC

Industrial Digital Technologies
- Artificial Intelligence (AI)
- Big Data
- Internet of Things (IoT)

Connectivity
- 5G
- LPWAN
- Tech to develop connected, intelligent processes
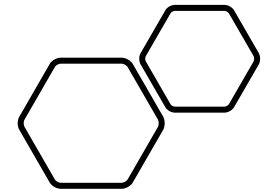
Company Appraisal and reporting...

❑ **Summary of issues identified in the analysis with suggested ways in which these can be rectified**

❑ **Identification of potential opportunities**

❑ **Recommendations on route forward with potential output/benefits identified**

❑ **External resources required (if applicable)**

❑ **Recommended timescale for changes (window of opportunity)**

❑ **Business data to enable a baseline to be created**

- Representation from Snr. Management and appropriate staff

- Access to "shop floor" / production facilities

- Access to production data (if measured/recorded)

- Honesty and transparency

Commitment from the participating companies...

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How to get in touch…

Welsh Government Innovation Specialists

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Website:
www.uwtsd.ac.uk/smartdigitalaccelerator

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