

# IOM ENGINEERING & MANUFACTURING PHASE ONE REPORT SUMMARY



# EXECUTIVE SUMMARY



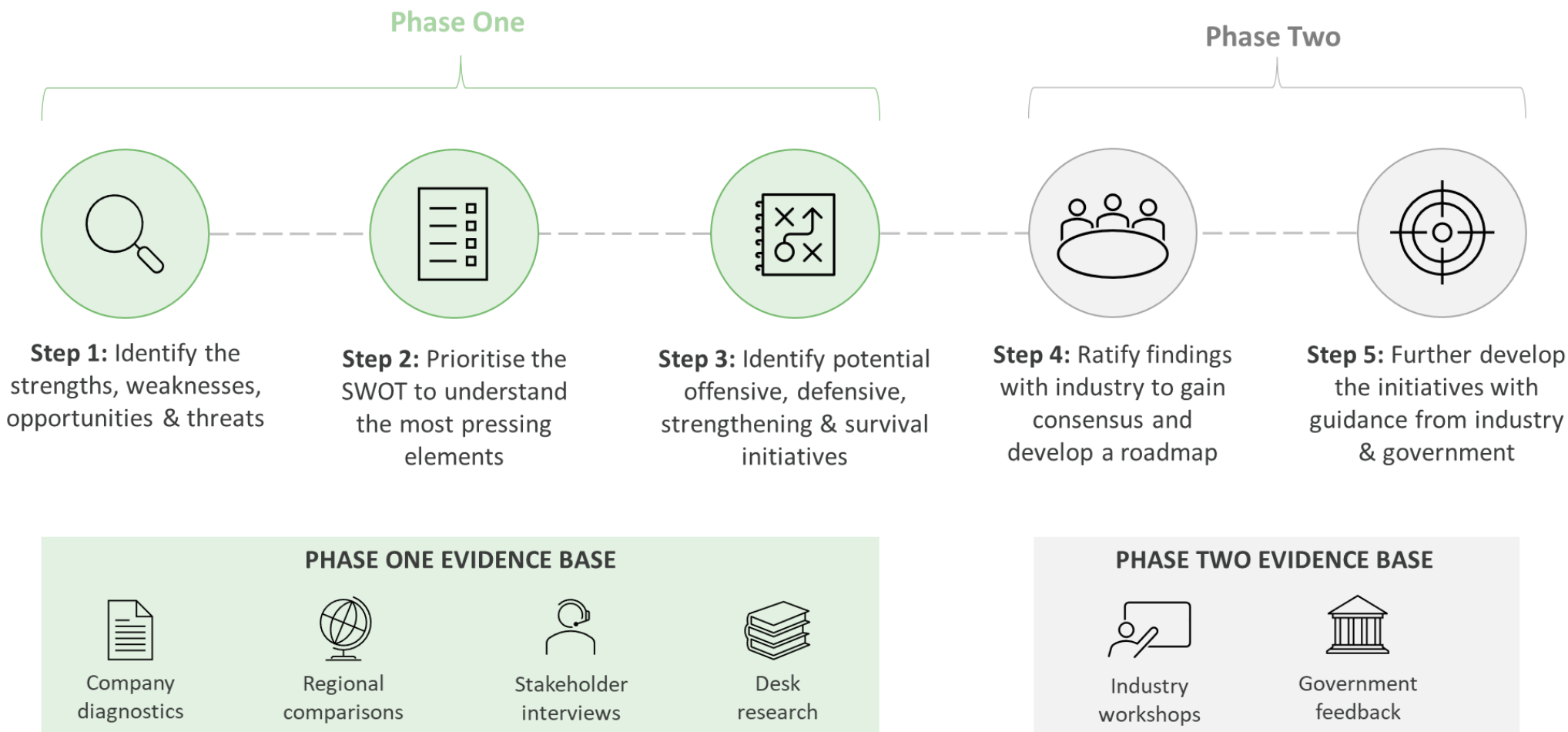
Highlighted below are the key takeaways that emerged from the analysis, which are further reinforced with evidence throughout the body of this summary.

- ❖ Despite the higher cost base of doing business on the Island, the IOM possesses a strong baseline of existing E&M businesses and a network of entrepreneurs.
- ❖ The high quality of life, taxation benefits and access to decision makers are unique selling points for the Island and should be leveraged more to attract businesses, people and high net worth individuals.
- ❖ Access to talent was the resounding business constraint emerging from the Island's E&M sector.
- ❖ Length of decision making to acquire or expand facilities was a major concern for foreign direct investment opportunities and smaller businesses on the Island.
- ❖ Access to finance was a common constraint across both established and new businesses.
- ❖ Innovation and new products emerge solely from the private sector and should be further encouraged and incentivised by the IOM Government.
- ❖ The opportunities for the E&M sector to supply into the clean tech sector emerged from both entrepreneurs on the Island but also existing businesses that supply into energy, defence and aerospace sectors.
- ❖ The Island can profitably manufacture products but it's more suited to luxury / high end products where the logistical challenges are less pronounced.
- ❖ The Island's natural strength across digital technologies and sectors could be utilised to improve the performance of E&M businesses and forge new opportunities in digital manufacturing.
- ❖ Consolidation of operations from multinational firms away from the IOM is a major threat to the future of the E&M sector.
- ❖ Growth opportunities could be missed in the future unless decision-making processes versus competitor regions are shortened.

# E&M STRATEGY PROCESS FLOW



**Phase One establishes the evidence base**, drawing on information from multiple sources to create a detailed SWOT of the current capabilities of the IOM's E&M sector.





A man in a blue shirt and safety glasses is inspecting a circular metal component in a factory setting. He is holding the component with both hands and looking at it closely. The background shows a large industrial facility with various machines and equipment. A sign in the background reads "Component Manufacturing".

# OVERVIEW OF THE ISLE OF MAN'S E&M SECTOR

## KEY POINTS

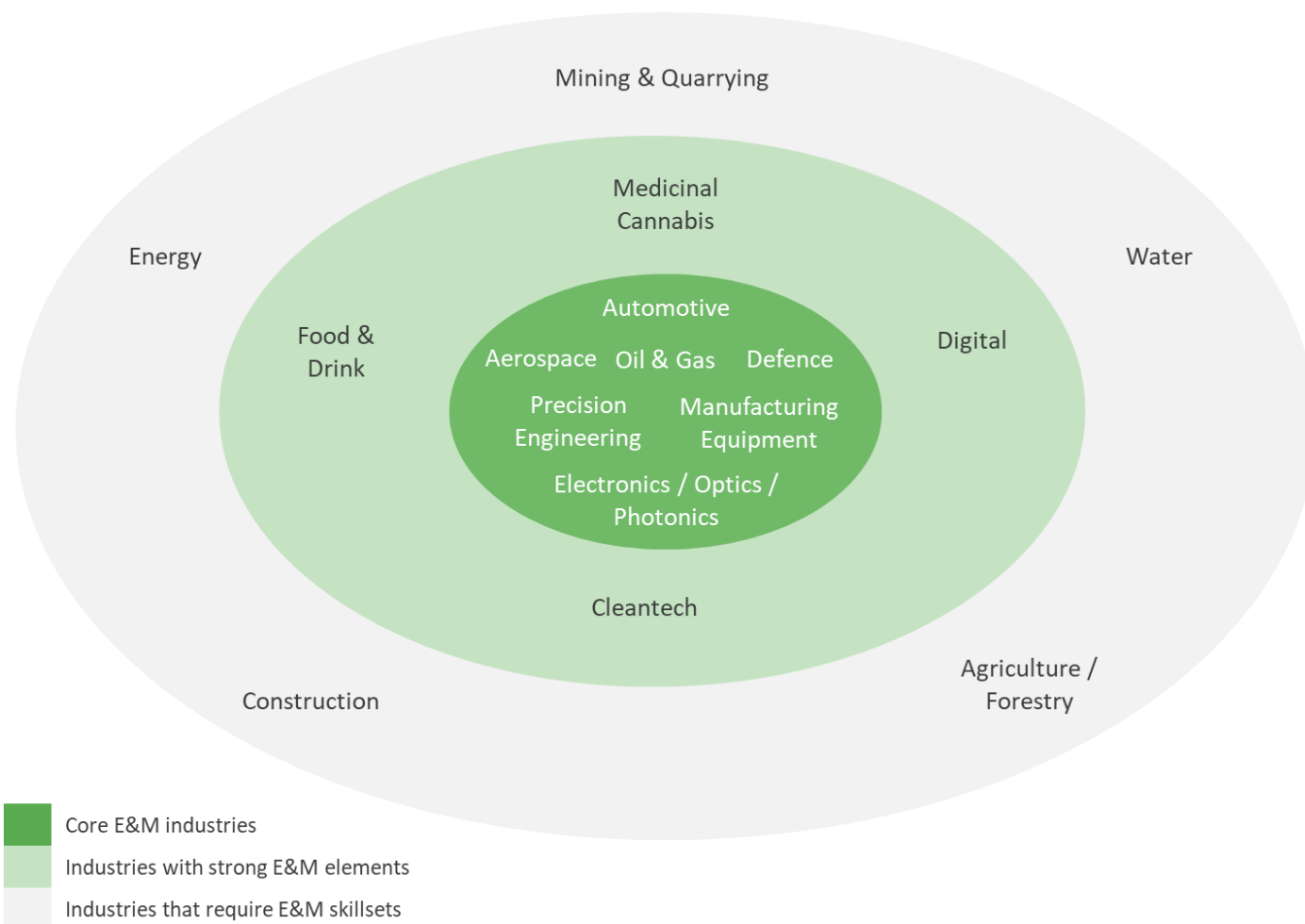


- ❖ Through the stakeholder engagement process it became apparent that the E&M sector is defined very narrowly in the IOM, and often equated with the 4 to 5 larger companies on the Island. The E&M sector heavily influences a range of broader sectors, and as such shares common challenges and opportunities.
- ❖ The core E&M sector, as defined by the IOM, is predominately made up of SMEs. However, the bulk of job creation and economic activity can be attributed to 4-5 of the larger companies on the Island.
- ❖ The general manufacturing sub-sector has higher levels of labour productivity, national income and wage growth. This makes it one of the strongest performing sectors within the wider producing economy.
- ❖ The engineering sub-sector has lower levels of labour productivity, national income and wage growth. While comparable to agricultural, forestry & fisheries and better performing than food and drink, it still performs below general manufacturing.
- ❖ The presumption is that engineering is usually a value-add activity, involving higher skill levels and wages vs general manufacturing. This suggests that other companies could be being categorised within engineering and may inflate the job numbers, income and overall productivity.

# UNDERSTANDING E&M'S INFLUENCE ON THE ECONOMY



**Despite the E&M sector being narrowly defined** on the Isle of Man, it has significant influence on a range of other sectors that share common challenges and opportunities.



**Core E&M industries:** This inner circle represents the key industries and sectors typically associated with the IOM's E&M sector

**Industries with strong E&M elements:** The middle circle represents those sectors that aren't immediately recognised as the IOM's E&M sector, but are strongly reliant on similar principles, skillsets, and machinery that the core E&M companies rely on.

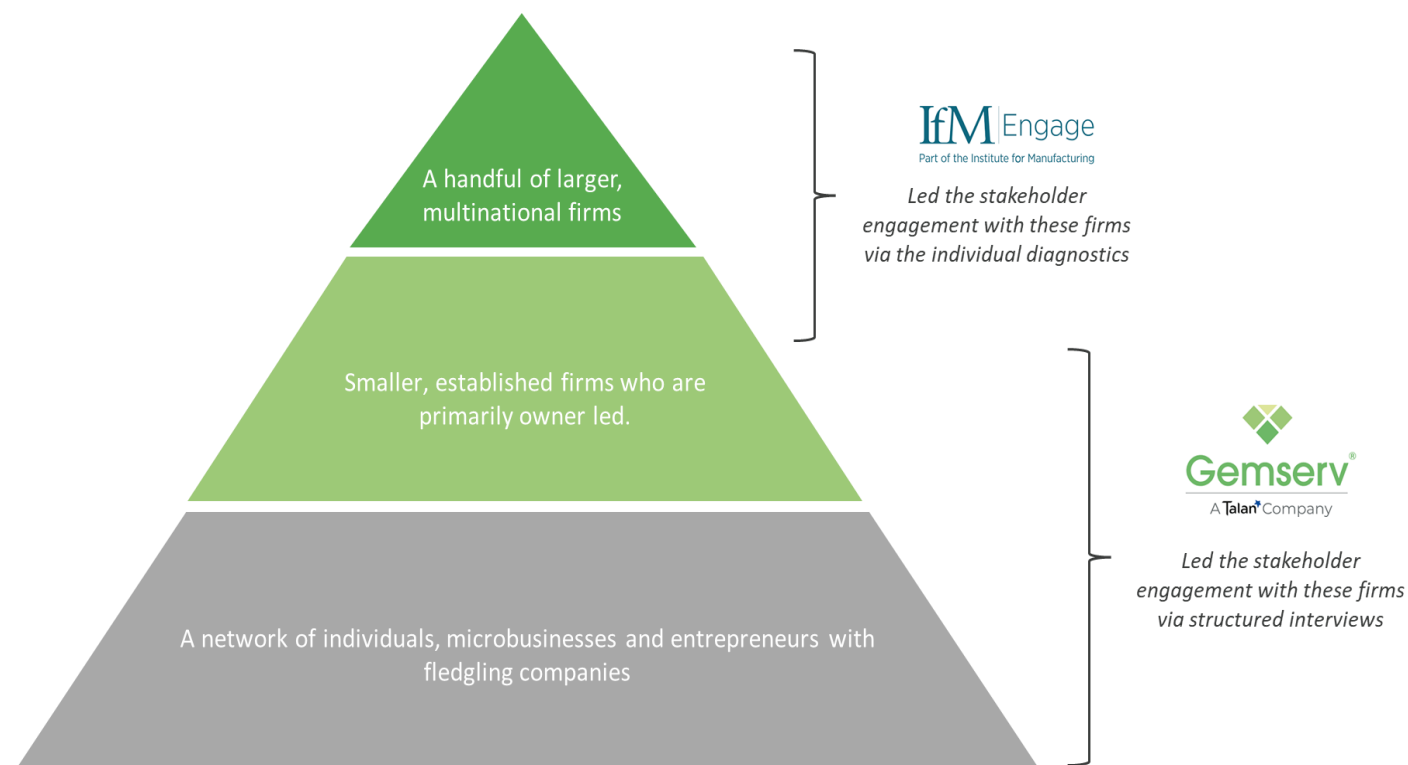
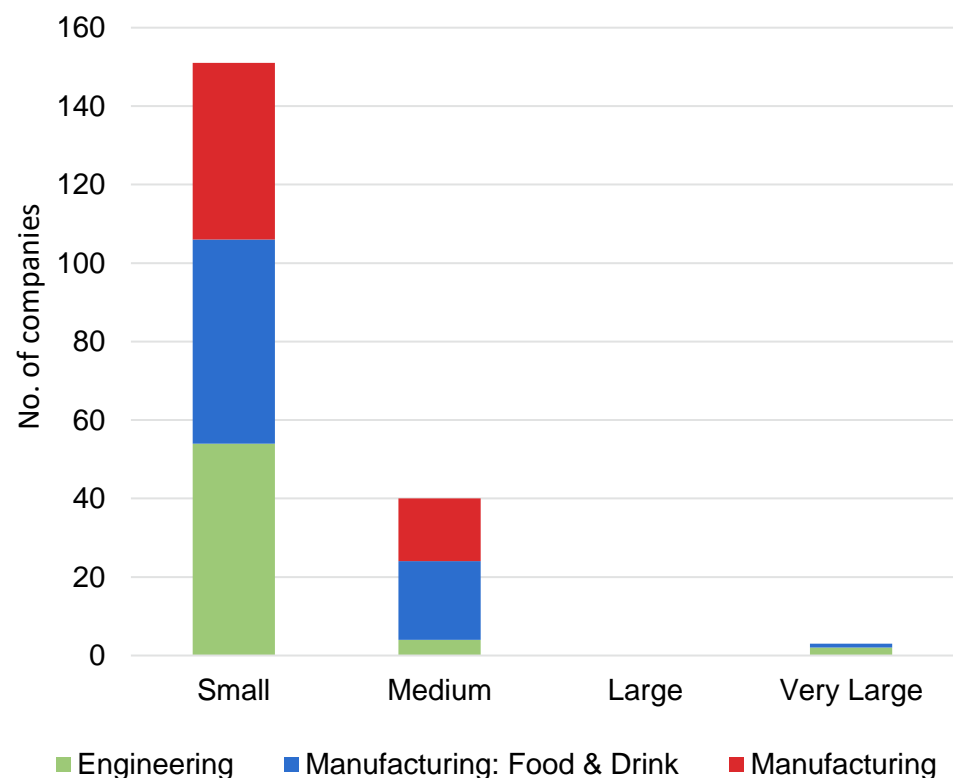
**Industries that require E&M skillsets:** These industries are further removed from the E&M sector but still rely on the skillsets for certain activities.

# STRUCTURE OF COMPANIES ON THE ISLAND



Like the rest of the Isle of Man economy, **most of the businesses in the E&M sector are small or medium size.** However, a handful of the larger companies dominate job creation and economic activity.

*Number of companies in the E&M sector by company size*

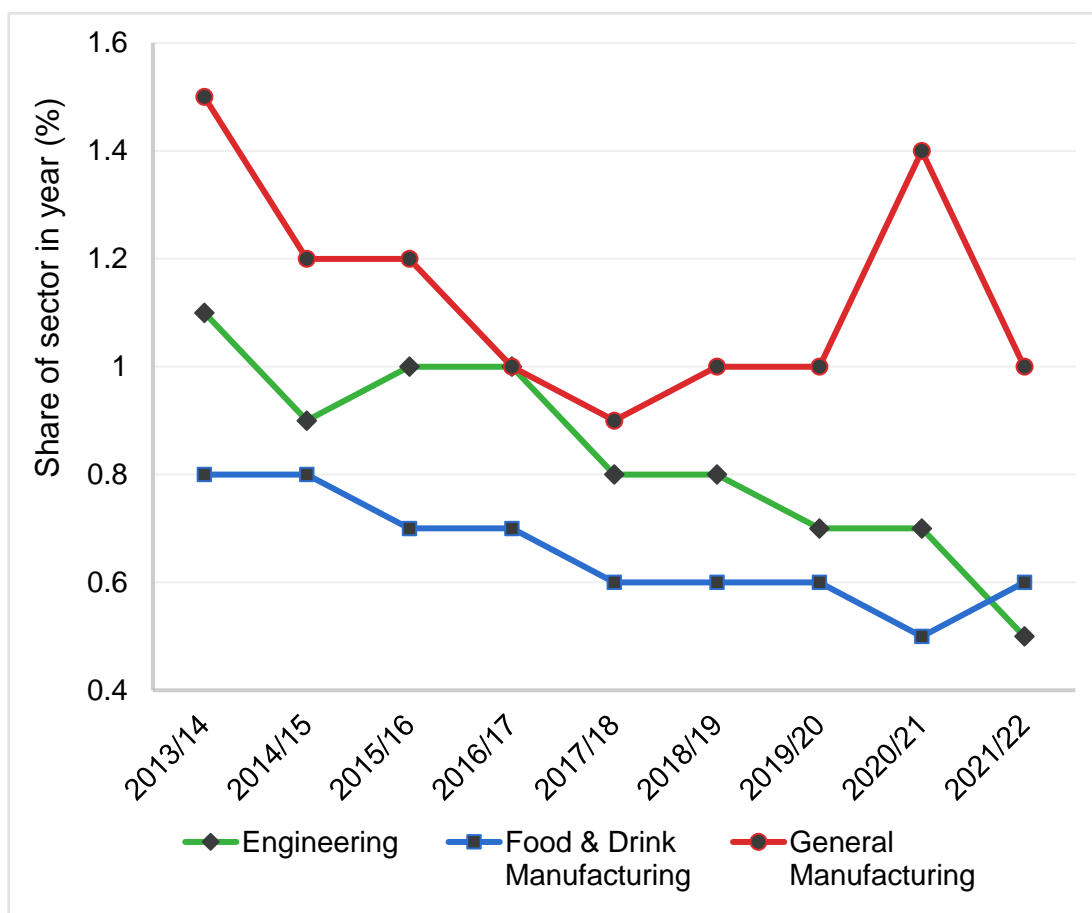


# E&M SECTOR'S TOTAL ECONOMIC CONTRIBUTION

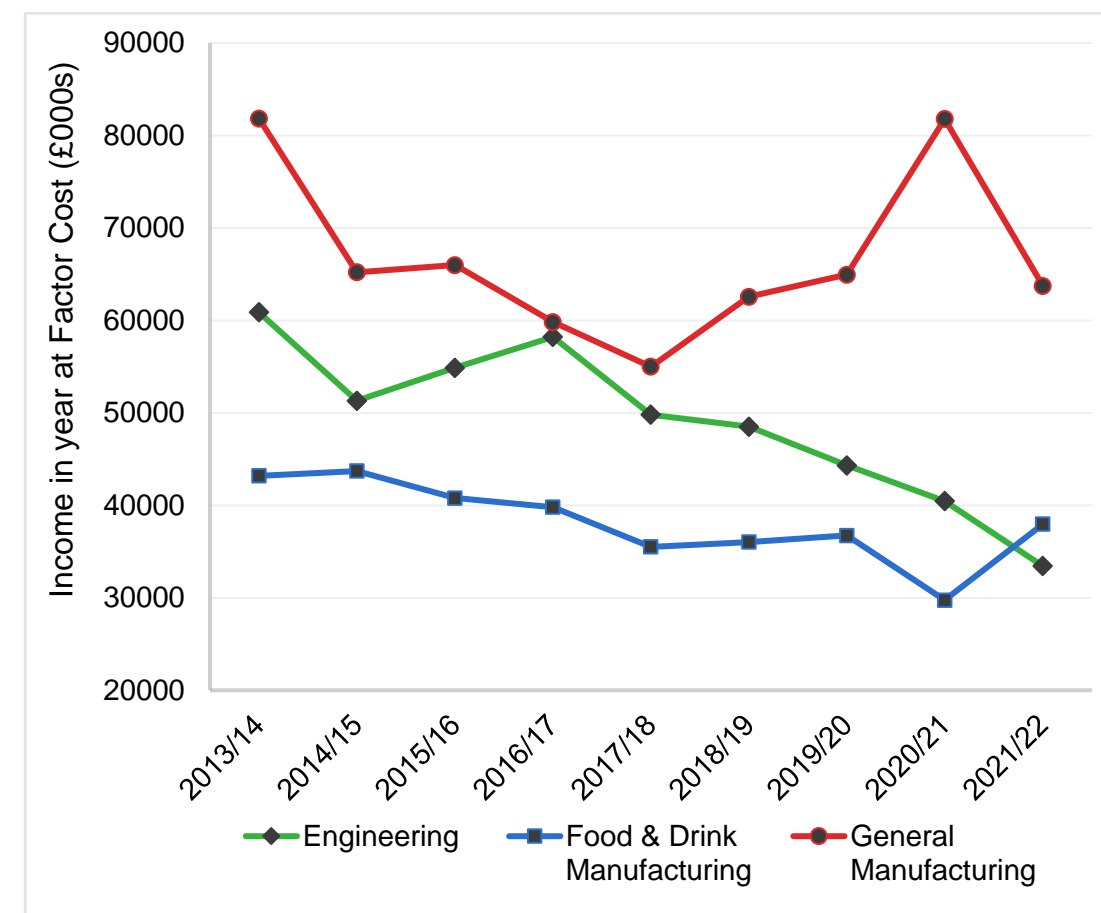


Engineering has witnessed a consistent, gradual decline over the years whereas general manufacturing has experienced periods of growth and decline.

*IOM sourced income as % of GDP for manufacturing sub-sectors*



*IOM sourced income for manufacturing sub-sectors (2023 constant prices)*



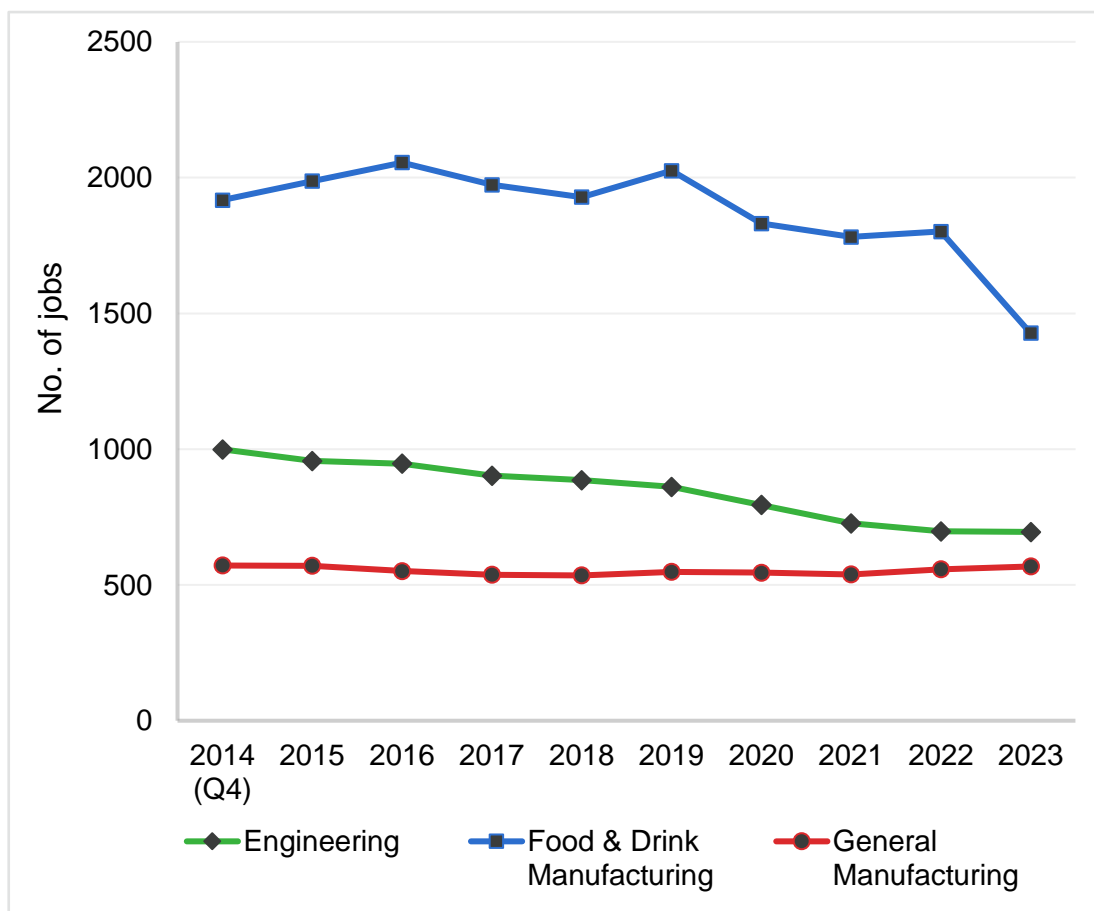


# TOTAL JOBS AND WAGE PROFILE OF THE E&M SECTOR

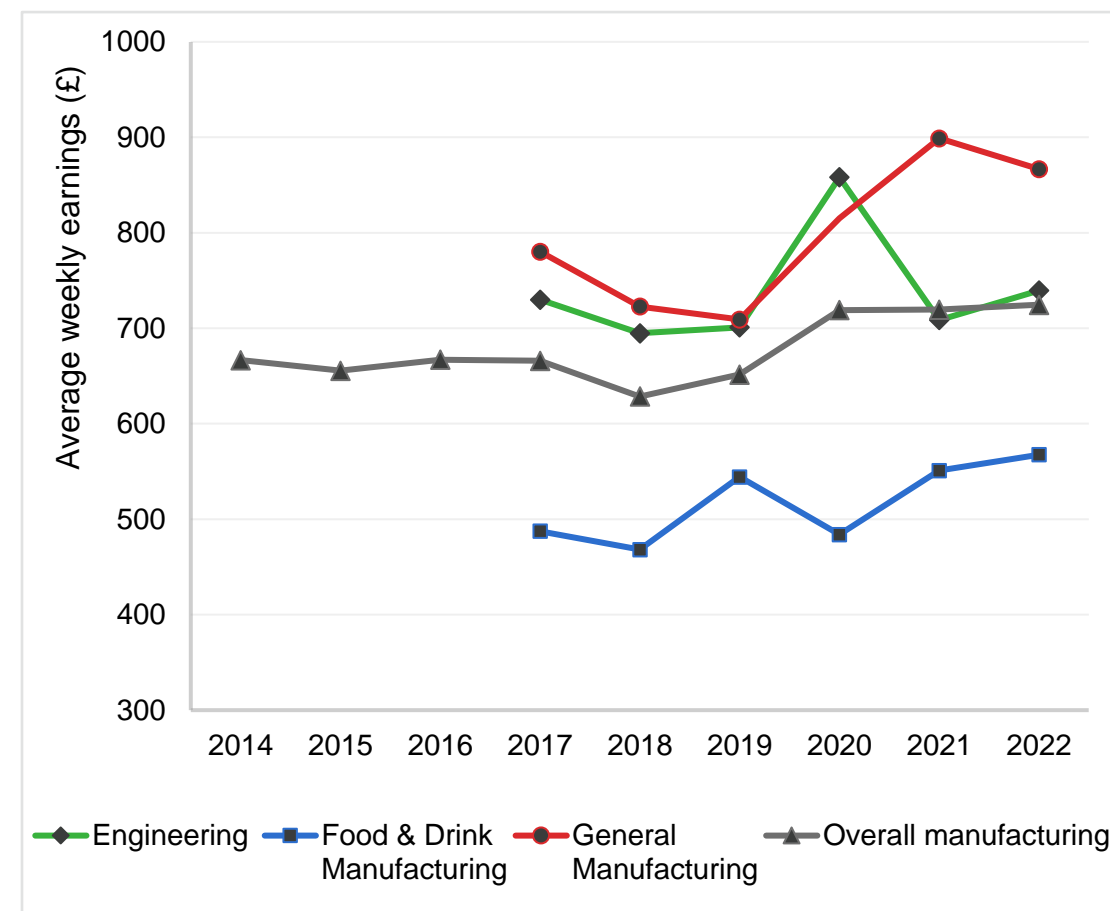


**Engineering has experienced consistent job losses** over the past decade whereas **general manufacturing jobs have remained constant**. Wage increases are prevalent more in manufacturing than in engineering, with divergence occurring from 2020-2021.

*Private sector jobs in manufacturing sub-sectors*



*Average weekly earnings for manufacturing sub-sectors (£ per week, 2023 constant prices)*



# INDICATIVE LABOUR PRODUCTIVITY OF SUB SECTORS



**The E&M sector performs the best vs other producing sectors** like food and drink manufacturing, agriculture forestry and fisheries and mining, quarrying and construction.

Sector	National Income – 2021/2022 (£'000)	Private sector jobs (Q1 2022)	Indicative annual national income per private sector job (£ per job)
Engineering	33,441	703	47,569
General Manufacturing	63,734	548	116,303
Food and Drink Manufacturing	37,971	1,766	21,501
Agriculture, Forestry and Fisheries	22,234	469	47,407
Mining, Quarrying and Construction	384,488	3,392	113,351
eGaming	958,152	864	1,108,972
ICT	282,966	1,423	198,852



# ASSESSING THE ISLE OF MAN VS COMPARATOR REGIONS

# DEFINING A COMPARATOR REGION

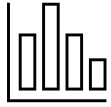


When comparing the E&M sector, other Crown Dependencies and larger comparators like the G7 nations or UK economy weren't suitable. Instead, other regions were selected based on their size and sector strengths.

Region type	Description of region type	Selected regions
Island nations in the UK	These regions have similar logistical difficulties, concerns around demographics, challenges in gathering a critical mass of companies to form clusters and limited access to academia. These regions also possess an E&M sector in similar industries to the IOM.	Isle of Wight
		Scottish Highlands and Islands
UK region with sector competitors	These regions have similar E&M businesses in the same sectors. These were areas that had core strengths in advanced manufacturing, particularly in aerospace, precision engineering and optical products. Desk research and interviews were also used to pick regions where the IOM had a business or academic connection to, for example, where other parent company sites were based.	Mid-Lancashire
		Flintshire and Wrexham
		Torbay
International island nations	These regions are international islands that also possess a manufacturing industry. Like the IOM, these nations often focus on advanced manufacturing products that are either niche, specialised or the country has a historic presence in and has made work on the island.	Malta
		Cyprus
		Singapore



# MAIN INSIGHTS FROM THE QUANTITATIVE COMPARISON



## General Metrics

- The IOM has a large GDP in respect to its total population vs many of the UK comparator regions.
- No GVA data exists across any sector for the IOM, but the IOM has a lower proportion of its economy dedicated to manufacturing vs competitor regions.
- No data for foreign direct investment could be sourced for the IOM.



## Key Business Metrics

- The IOM is low performing when considering some costs manufacturers incur, such as wages, industrial land prices and industrial electricity costs.
- IOM is attractive when taking into consideration business rates, industrial rent prices, corporation tax levels and personal taxation.
- % planning applications deemed on time has been declining for several years, with the IOM the lowest out of all UK regions assessed.



## Innovation & Knowledge Metrics

- Current and historic funding into E&M R&D is lower for IOM than all UK comparator regions aside from Torbay. The IOM level of R&D spend across all sectors is lower than comparator regions.
- No IOM data exists on the total employees in R&D roles. IOM has a comparatively low % of the workforce with a post-secondary qualifications.
- IOM has a relatively older population but still a younger population than Torbay, Isle of Wight & the Scottish Highlands and Islands.

### Metrics

Population  
GDP (£mn)  
Manufacturing GVA (£mn)  
% manufacturing of GDP / GVA  
% FDI in manufacturing sector

Annual average wages (£)  
Median Industry Electricity Prices (p/kWh)  
Industrial land value (£/ha)  
Main corporation tax rate  
Planning applications on time (%)  
Logistics rating (1-5)  
Business rates (£/sqft)  
Annual rent (£/sqft)

Estimated R&D funding into the E&M sector (£)  
Total expenditure on general R&D (% of GDP)  
Total employees in R&D (%)  
Estimated % of workforce with post-secondary qualifications  
% of population under 40

# GENERAL PERFORMANCE INDICATORS



- ❖ The regions have a spread of populations and economy sizes, with IOM having a larger GDP than most UK sub-regions
- ❖ No data exists for the IOM on GVA, with indicative GVA of 8 companies assessed being £62.9m, which is broadly comparable with Torbay.
- ❖ IOM has the lowest proportion of its economy dedicated to manufacturing of the regions assessed. The UK sector competitors (bar Torbay) had significantly higher proportions indicating these regions are more geared towards the E&M sector.
- ❖ There is no correlation between % Foreign Direct Investment (FDI) in manufacturing and prominence in the economy. However, Torbay's economy is highly reliant on FDI to support its manufacturing sector, which may explain a strong interest in FDI incentives.

GENERAL PERFORMANCE INDICATORS					
	Population	Total GDP (£mn)	Manufacturing GVA (£mn)	Manufacturing % of total GVA/GDP	% of FDI in manufacturing
Isle of Man	84,530	6,372	No data	2 %	No data
Isle of Wight	140,889	3,489	312	11 %	22 %
Scottish Highlands and Islands	99,774	3,075	284	10 %	22 %
Mid-Lancashire	402,573	16,294	3,230	22%	8 %
Flintshire & Wrexham	290,208	10,470	3,695	39 %	19 %
Torbay	139,446	2,803	99	4 %	39 %
Malta	533,000	14,082	1,246	7 %	4 %
Singapore	5,976,000	350,173	83,254	22 %	25 %
Cyprus	908,000	22,707	333	6 %	N/A

# KEY BUSINESS FACTORS



- ❖ IOM has the highest annual average wages of all the regions selected.
- ❖ IOM industrial electricity prices are slightly higher vs the UK small business average and considerably more expensive than international comparators.
- ❖ Industrial land values for IOM are considerably higher vs the rest of the UK, comparable to Cyprus but less significantly less than Malta and Singapore. Interestingly, this doesn't necessarily follow through to industrial rent prices, where IOM is second lowest out of all regions assessed. A possible factor at play is IOM government influence over rental contracts.
- ❖ IOM has the lowest corporation tax rate of all the regions analysed, and business rates are also lowest, aside from Malta and Cyprus which do not collect business rates.
- ❖ Compared to UK regions, the % of planning applications on time are considerably lower.

	KEY BUSINESS FACTORS							
	Annual average wages (£)	Industry Electricity Prices - Median (p/kWh)	Industrial land value (£/ha)	Main Corporation Tax Rate	Planning applications on time (%)	Logistics rating	Business rates (£/sqft)	Annual rent (£/sqft)
Isle of Man	48,309	25.3	1,336,711	0 %	43 %	1	0.68	6.61
Isle of Wight	28,248	21.9	842,034	25 %	86 %	1	8.92	21.52
Scottish Highlands and Islands	29,364	21.9	120,081	25 %	58 %	2	3.69	7.40
Mid-Lancashire	32,095	21.9	603,458	25 %	88 %	2	7.00	16.88
Flintshire & Wrexham	31,145	21.9	297,500	25 %	63 %	5	6.55	14.39
Torbay	27,630	21.9	400,000	25 %	92 %	2	8.45	20.38
Malta	21,798	11.5	21,588,918	35 %	N/A	N/A	-	7.00
Singapore	37,356	14.7	46,424,651	17 %	N/A	N/A	1.30	13.01
Cyprus	18,636	16.7	1,194,845	12.5 %	N/A	N/A	-	4.03

# INNOVATION, SKILLS & KNOWLEDGE METRICS



- ❖ Current and historic funding into E&M R&D is lower than UK comparator regions, aside from Torbay. General levels of R&D spend across all sectors is lower than all comparator regions.
- ❖ No IOM data exists on the total employees in R&D roles.
- ❖ IOM has a comparatively low % of the workforce with a post-secondary qualifications.
- ❖ IOM has a relatively older population but still a younger population than Torbay, Isle of Wight & the Scottish Highlands and Islands.

	INNOVATION, SKILLS AND KNOWLEDGE					
	Total annual government-led R&D funding in E&M (£)	Total estimated annual private and public R&D funding in E&M (£)	Gross domestic expenditure on research and development (% of GDP)	Total employees in R&D (%)	Estimated % of workforce with post-secondary qualifications	% of population under 40
Isle of Man	732,260	No data	0.4 %	No data	31 %	42 %
Isle of Wight	30,386,945	No data	1.7 %	1.1%	31 %	38 %
Scottish Highlands and Islands	4,576,268	No data	0.5 %	0.2%	45 %	41 %
Mid-Lancashire	4,305,470	No data	0.9 %	0.8%	38 %	48 %
Flintshire & Wrexham	12,091,642	No data	1.2 %	0.9%	37 %	47 %
Torbay	559,845	No data	1.2 %	0.8 %	31 %	41 %
Malta	N/A	54,074,457	0.7 %	0.4 %	31 %	51 %
Singapore	N/A	4,163,710,466	1.7 %	2.4 %	63 %	46 %
Cyprus	N/A	55,854,000	0.8 %	0.4 %	48 %	54 %



# INDICATIVE OVERALL COST COMPARISON

When cost elements of the metrics collected are applied to different company archetypes, **medium-large manufacturing businesses with relatively low numbers of employees and high profits** appear to be more favourable in the IOM.

Company archetype details		ARCHETYPE 1	ARCHETYPE 2	ARCHETYPE 3	ARCHETYPE 4	ARCHETYPE 5
	No. of full time employees (FTE)	11	48	61	43	202
	Annual electricity consumption (kWh)	30,000	25,000	51,000	36,000	52,000
	Annual taxable profits (£)	447,410	1,659,729	3,000,000	2,757,935	3,005,099
	Size of business premises (sqft)	4,733	20,496	51,365	146,080	153,627
Indicative cost in comparator region compared to IOM	IOM	100 %	100 %	100 %	100 %	100 %
	Isle of Wight	92 %	95 %	112 %	177 %	101 %
	Scottish Highlands and Islands	86 %	84 %	92 %	108 %	78 %
	Mid-Lancashire	93 %	97 %	109 %	157 %	99 %
	Flintshire & Wrexham	91 %	93 %	105 %	146 %	94 %
	Torbay	91 %	93 %	109 %	170 %	98 %
	Malta	59 %	67 %	72 %	83 %	58 %
	Singapore	75 %	88 %	93 %	116 %	90 %
	Cyprus	59 %	52 %	56 %	58 %	46 %

Indicative overall costs for Archetype 3 and Archetype 4 suggest IOM as more attractive than most or all UK comparator regions. Archetype 4 in particular could represent a **highly automated medium-large manufacturing business**, with a large facility but low number of employees.

It should be noted that not all costs relevant to businesses are included in this analysis, and that metrics are based on available data and are average values (where possible) – therefore cost comparisons for a specific businesses may be significantly different.

# POLICY SUPPORT FOR E&M SCORING MATRIX



Analysis of policies was also undertaken for each comparator region, showing overall a medium-low score for IOM for most policy aspects. For support for skills and talent development, however, IOM performs the best, alongside Singapore.

Policy Scoring Criteria	Comparator Regions								
	Isle of Man	Isle of Wight	Scottish Highlands & Islands	Mid-Lancashire	Flintshire and Wrexham	Torbay	Malta	Cyprus	Singapore
Clarity of engineering & manufacturing vision and sub-sector prioritisation	3	=	=	+	+	+	+	+	+
Subsidies that encourage FDI into the region	3	-	=	+	+	+	+	=	+
Subsidies that support companies invest in CAPEX / machinery	2	+	+	+	+	+	+	+	+
Levels of investment into local R&D	2	+	+	+	+	+	+	+	+
Policies / environment that supports access to facilities	2	=	+	+	=	+	+	+	+
Prevalence of enterprise zones / investment zones	3	-	=	+	+	-	=	=	+
Support to reduce manufacturing energy costs	3	+	+	+	+	-	+	+	+
Policies to support the growth of SMEs	3	+	+	=	=	=	=	+	+
Proximity to universities and innovation institutions	1	+	+	+	+	+	+	+	+
Support for skills and talent development	5	-	-	-	-	-	-	-	=
<b>Total Score</b>	<b>27</b>	<b>+</b>	<b>+</b>	<b>+</b>	<b>+</b>	<b>+</b>	<b>+</b>	<b>+</b>	<b>+</b>



(+) Scores higher, (-) Scores lower, (=) Scores equal

Low → High

# INDUSTRIAL INNOVATION CAPABILITIES ON THE ISLE OF MAN



Based on the evidence gathered, the Isle of Man's industrial innovation capabilities across industry and academia are relatively weak **with the sole provider of innovation being the private sector.**

	<i>Knowledge Generation</i>	<i>Knowledge Diffusion</i>	<i>Knowledge Absorption</i>
<i>Academia</i>	1	1	2
<i>Industry</i>	3	2	3

**Knowledge generation:** capabilities to create new knowledge (including research in universities, public and semi-public research centres, and private firms)

**Knowledge diffusion:** capabilities to diffuse knowledge (including intermediary institutions, advanced business services, extension services, and industrial training in emerging technologies)

**Knowledge absorption:** capabilities to absorb knowledge (including firm in-house design and engineering, development, and application customisation)

Score	Description
1	No evidence of capability in industry / academia
2	Limited evidence of capability in industry / academia that is below most comparator regions
3	Fair evidence of some capabilities in industry / academia that is in line with comparator regions
4	Good evidence of capability in industry / academia that is competitive with comparator regions
5	Extensive evidence of capability in industry / academia that surpasses most comparator regions

# IOM MANUFACTURING SUITABILITY



Based on the evidence gathered during Phase One, certain products are more suited for manufacturing on the IOM based on **the production volumes** and the **complexity in transporting the product off the Island**.

Production volumes / level of commoditisation	High volume / commodities	High volume food and drink production (internal consumption)	Lightweight, small precision engineered components	High volume automotive components / assembly (e.g. engines) Semiconductors / microchips
	Medium volume, higher end	Luxury, high end food production	Medical devices Optical devices Food and drink production for export Aerospace components / sub-assembly Specialist lightweight materials (i.e. sustainable fibres)	High volume metal forming
	Bespoke / luxury volumes	High net worth individual consumer goods (jewellery, classic cars) Machine tools and manufacturing equipment	Military / defence equipment High performance motorcycles	
		No JIT requirement / made for IoM consumption	JIT requirements, IoM capabilities adequate / workaround	Strict JIT requirements, nature of product challenging for IoM logistics
Complexity of logistics and transporting products to clients				

## Complexity of logistics definition:

**The nature of the product** reflects inherent characteristics of the product like the size, weight and how difficult it would be to package multiple products within a shipping container

**The capabilities of existing logistics network** refers to the capacity and capability of the road and shipping logistics network to handle products

**The nature of the customer** reflects whether a product is needed as part of a just-in-time value chain

Product is more suitable

Product is potentially suitable

Product is less suitable



Regulator Assembly and Test



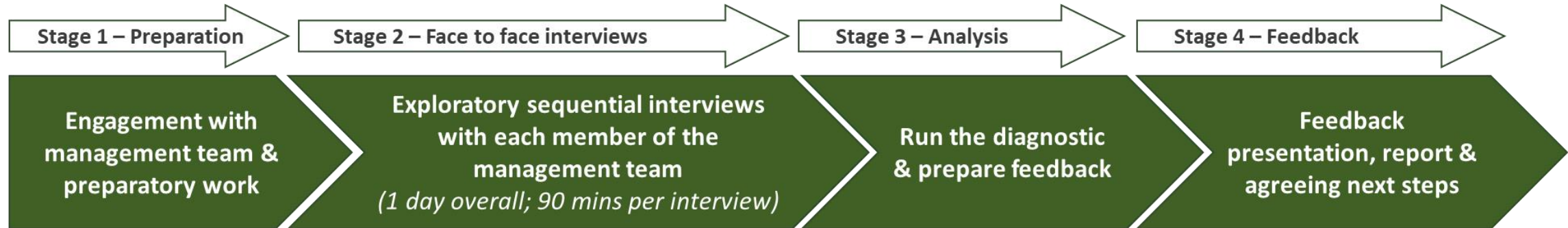
Assembly Inspection

# CROSS COMPANY INSIGHTS FROM THE DIAGNOSTIC

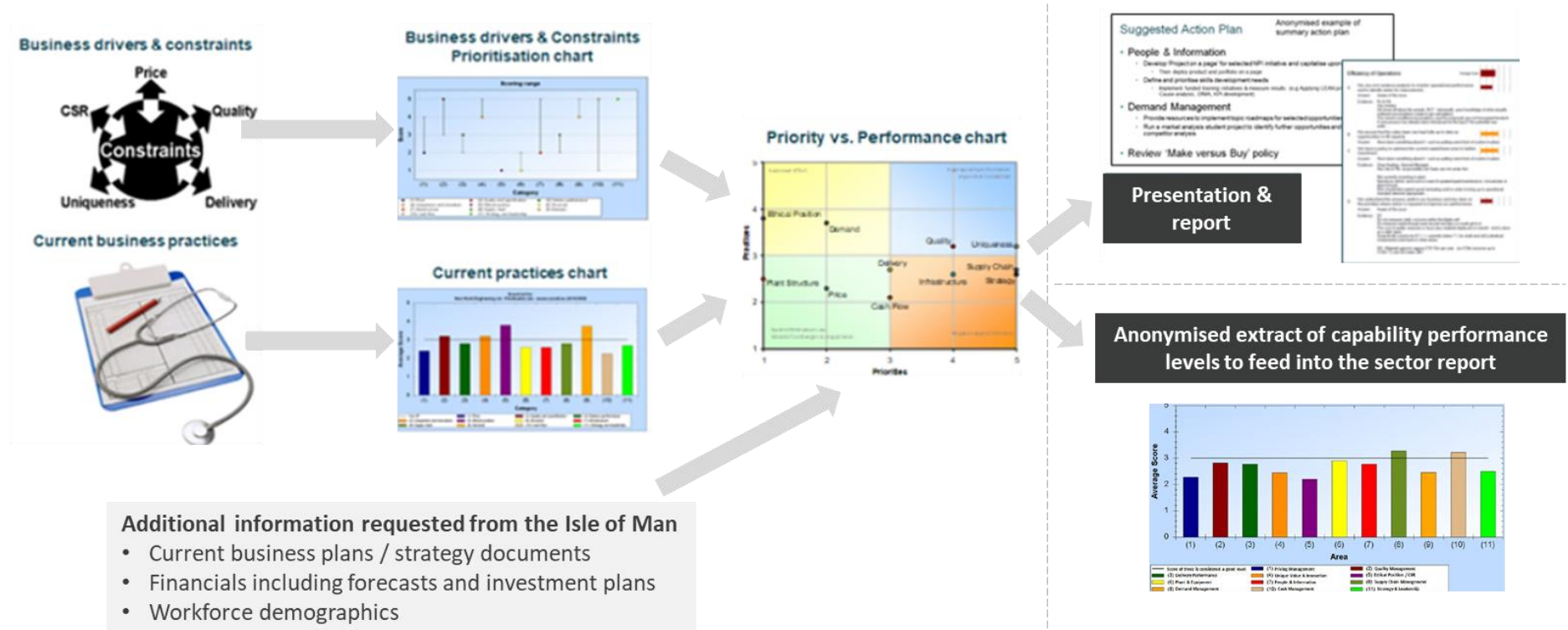
MAX. 116KG PER SHELF



# OVERVIEW OF THE COMPANY DIAGNOSTIC PROCESS



- Basic background research
- Engaging management team
- Scheduling interviews and feedback timing
- Obtaining relevant data from the management team





# COMPETITIVE DRIVERS & KEY CONSTRAINTS



The most important **order winning criteria** identified were **Unique Value** and **Quality** with the most prominent **constraints** being **People & Information** alongside **Plant & Equipment**.

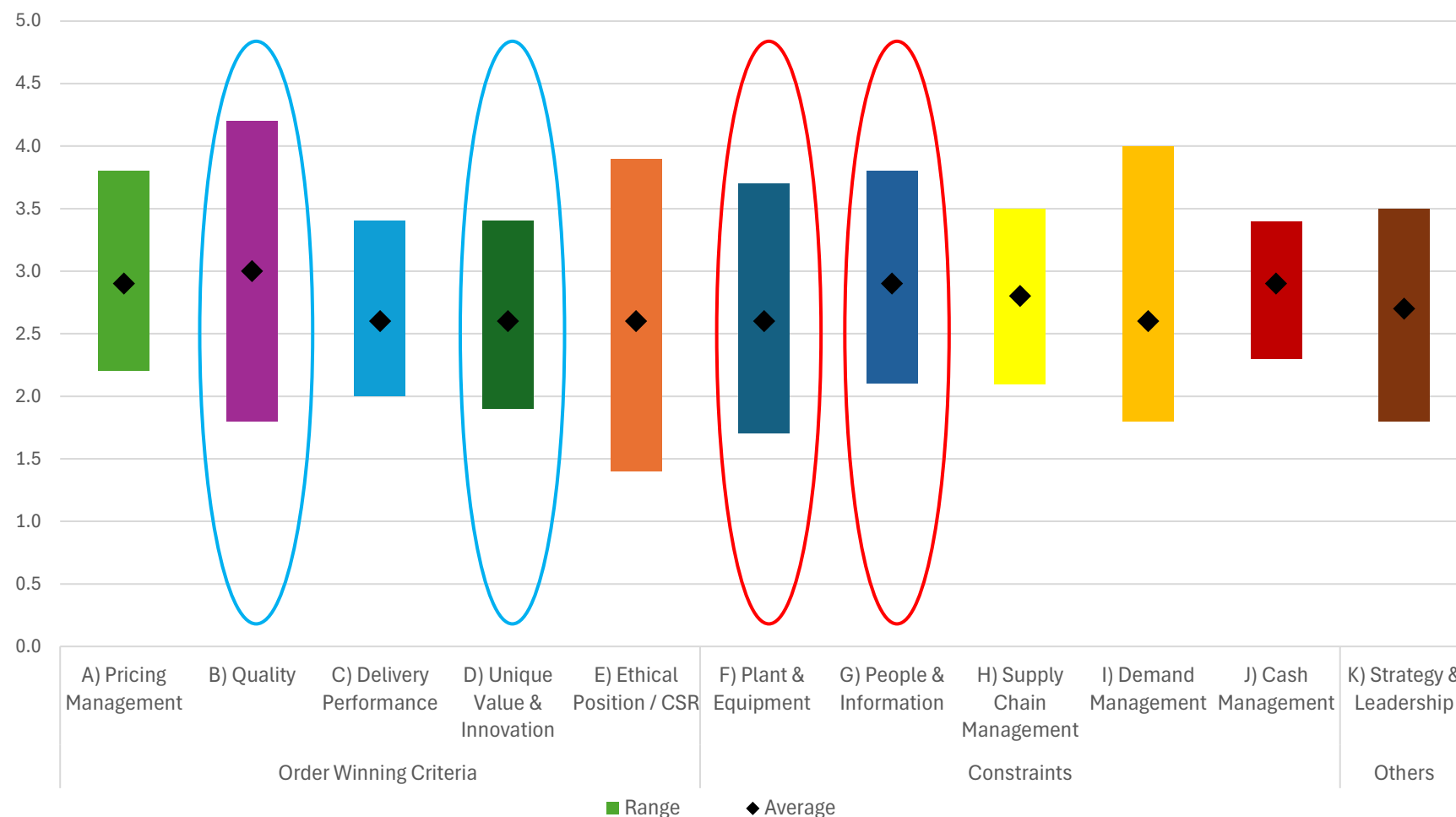
## Most important order winning criteria

- **8 out of 10 have Unique Value** as a key order winner (5 have top; 2 have 2nd; 1 has 3rd)
- **6 out of 10 have Quality** as a key order winner (3 have top; 3 have 2nd)

## Most likely constraints

- **All manufacturers highlight People & Information** as a highly likely constraint (4 have top; 5 have 2nd; 1 has third)
- **5 out of 10 have Plant & Equipment** as a highly likely constraint (2 have top; 2 have 2nd; 1 has 3rd)

The range and average of scores across the 10 businesses assessed



# GVA NUMBERS FROM THE E&M BUSINESSES



The GVA of 8 businesses totals approximately £62.9m representing around £97,500 per employee.

Total GVA*
~£62.9m

GVA = Profit before Tax + Employee/Labour costs including Social security/national insurance + depreciation/amortisation

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Average GVA* per IOM Employee
~£97,500 per employee

Average GVA\* per employee = total GVA divided by the total employees based in the Isle of Man

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*\*These figures are based upon the 8 out of 10 of the manufacturing companies who have so far shared these figures and are typically based upon the most recently completed annual reporting period and based on the proportion of employees based on the IOM only, whenever there are multiple sites included.*



# BUSINESSES PERCEPTIONS OF THE 5 GRAND CHALLENGES



Securing a future workforce and enhancing supply chain resilience are deemed the biggest threats while decarbonising manufacturing operations, products and supply chains seen mainly as an opportunity.

Grand challenges for companies & governments		Randomised order of manufacturer responses									
1	Decarbonising manufacturing operations, products and supply chains	2	1	1	0	4	2	5	5	1	0
2	Enhancing supply chain resilience	0	-1	-3	-1	-5	-4	-1	2	-4	-2
3	Accelerating the scaling up & adoption of novel industrial technologies	5	-5	0	0	3	2	5	-3	0	2
4	Securing the future of the manufacturing workforce	2	-5	-3	-4	-3	-2	-3	-5	0	-4
5	Linking business values with social & environmental responsibility	0	1	2	0	3	2	0	1	0	0

Key:   
Threat → Opportunity

- ❖ The two most frequently highlighted threats to IOM manufacturers are the challenges of securing the future of the manufacturing workforce, and the challenge of enhancing supply chain resilience.
- ❖ Decarbonising manufacturing operations products & supply chains is seen mainly as an opportunity, and in two cases, a strong opportunity.
- ❖ The challenge of accelerating the adoption of technologies seems most polarised for manufacturers.



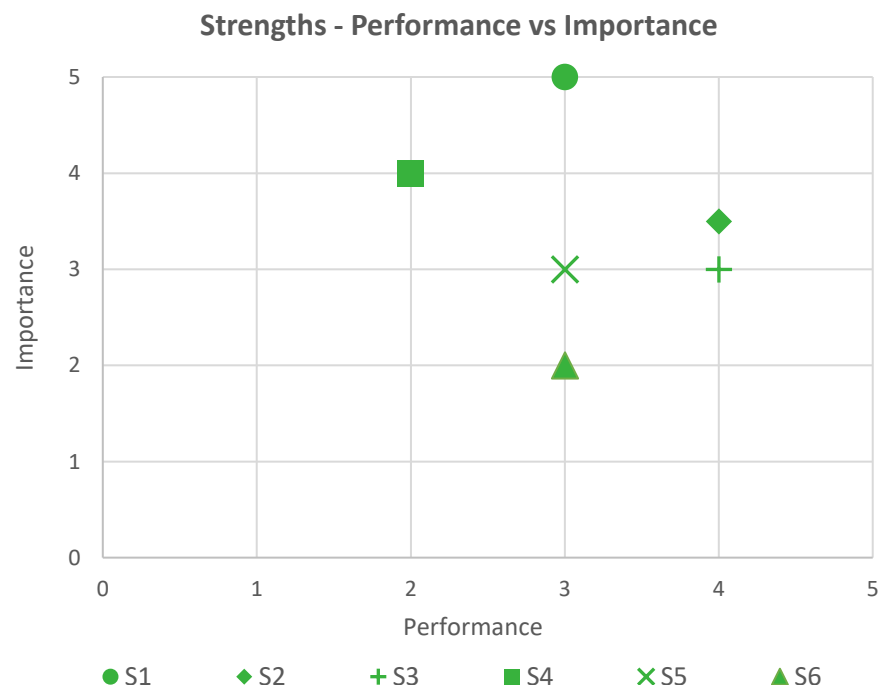
# STRATEGIC SWOT OF THE ISLE OF MAN'S E&M SECTOR



# PRIORITISING STRENGTHS



The IOM possess a strong baseline of existing E&M businesses who are competitive in their sectors. The Island is also an attractive place for entrepreneurial, high-net-worth individuals to locate who are passionate about the IOM.



**Performance:** The current performance of the IOM in this area vis comparator regions

**Importance:** The strategic importance of this strength to the current and outlook of the E&M sector

ID	Strengths	Performance	Importance	Priority Score
S1	A strong base of existing businesses on the Island competing globally in high value areas	3	5	15
S2	Strong capabilities in digital technologies which could help augment E&M capability	4	3.5	14
S3	A compelling location for high-net-worth individuals to relocate to	4	3	12
S4	A critical mass of entrepreneurs who would like to set up a greater IOM footprint	2	4	8
S5	Good industry-college relationship and courses suited for entry level E&M workers	3	3	9
S6	Relatively easy access to decision makers	3	2	6

## Performance

- 1 Isle of Man performs very weakly in this area compared to competitor regions
- 2 Limited evidence of performance in this area vs competitor regions
- 3 Some evidence of existing performance but most competitor regions are better placed
- 4 Strong evidence of good performance in this area vs the majority of competitor regions
- 5 Isle of Man performs over and above other regions in this strength

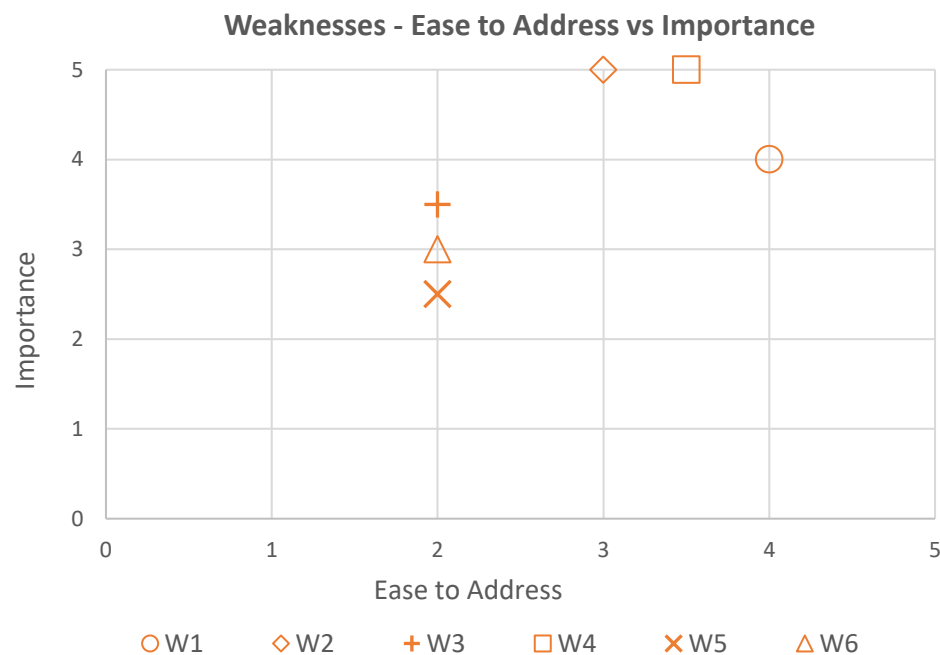
## Importance

- 1 No importance to the existing / current strengths of the E&M sector
- 2 Minor bearing on the current strength or potential future strengths of the E&M sector
- 3 Reasonable bearing on the current strength of the E&M sector and could be leveraged for growth
- 4 A significant strength that the E&M sector is leveraging or can leverage for growth
- 5 A fundamental strength that's vital to the existing strength of the E&M sector and is a foundational element to grow into the future

# PRIORITISING WEAKNESSES



Despite strong foundational elements, **the IOM E&M sector is consistently missing out on growth opportunities**. This includes both creating new, innovative companies alongside supporting existing companies to explore new markets.



**Ease to Address:** The ease of which the government could significantly address the weakness

**Importance:** The strategic importance of addressing this weakness to grow the E&M sector.

ID	Weaknesses	Ease to Address	Importance	Priority Score
<b>W1</b>	Difficulty in businesses accessing finance which is hampering growth	4	4	<b>16</b>
<b>W2</b>	The length of time to acquire new facilities or expand existing facilities	3	5	<b>15</b>
<b>W3</b>	Greater logistics challenges narrows the scope of products that could be manufactured on the Island	2	3.5	<b>7</b>
<b>W4</b>	Cultivating & attracting the right talent to work on the Island and in the E&M sector	3.5	5	<b>17.5</b>
<b>W5</b>	Lack of academic research community hinders ability to spin out innovations and generate new businesses	2	2.5	<b>5</b>
<b>W6</b>	The fundamental costs on the Isle of Man are higher vs the UK which is putting a strain on profitability	2	3	<b>6</b>

## Ease to Address

- 1 No ability to address this weakness
- 2 Limited ability to address this weakness, it would take a great amount of effort to enact change
- 3 Some ability to address this weakness but would take significant effort to enact change
- 4 Somewhat easy to address with the government expressing early interest in addressing the weakness
- 5 Easy to address this weakness with a high degree of willingness to address this from IOM Government

## Importance

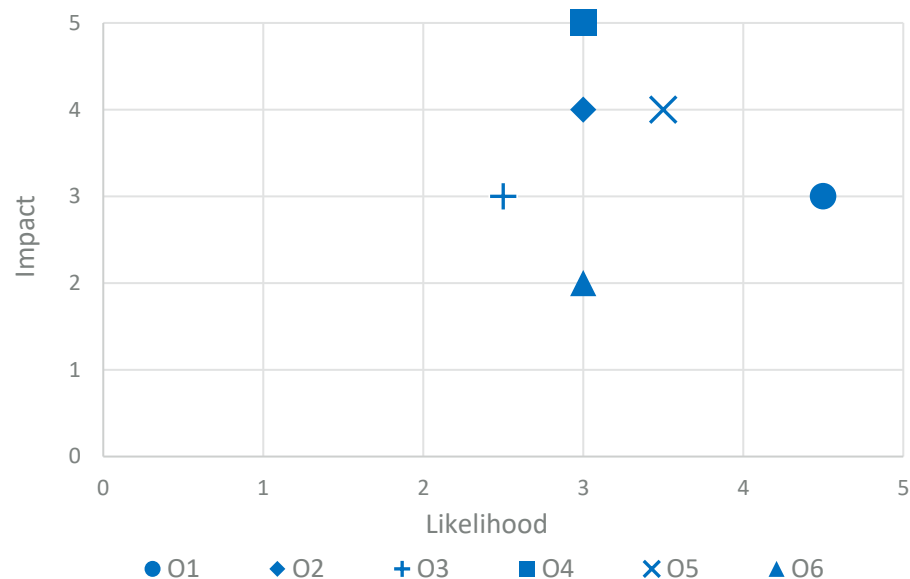
- 1 Weakness bears no importance to the existing / current growth of the E&M sector
- 2 The weakness has minor bearing on current or future growth potential of the E&M sector
- 3 The weakness has some bearing on the current strength of the E&M sector and if addressed could accelerate growth
- 4 A significant weakness that the E&M sector possesses that is an inhibitor to growth
- 5 A fundamental weakness that is vital to the future of E&M sector and is a foundational element to address

# PRIORITISING OPPORTUNITIES



DfE should consider pursuing a portfolio approach to supporting the sector, utilising its strengths in **government critical services, digital technologies** and building on existing, or potential, capabilities in the **cleantech supply chain**.

Opportunities - Likelihood vs Impact



**Likelihood:** The likelihood the Isle of Man realises the full potential of this opportunity

**Impact:** The impact on the E&M sector and wider economy of realising this opportunity

ID	Strength Description	Likelihood	Impact	Priority Score
O1	Enhance opportunities in government aligned services like defence	4.5	3	13.5
O2	Explore opportunities in government aligned services like energy	3	4	12
O3	Explore opportunities in government aligned services like health	2.5	3	7.5
O4	Capitalise on the growing cleantech sector by enabling E&M businesses to become suppliers in that transition	3	5	15
O5	Understand how digitalisation, data and AI could enhance the performance of E&M and create new opportunities	3.5	4	14
O6	Stimulate further intra-Island collaboration between the E&M sector and with the wider Isle of Man economy	3	2	6

## Likelihood

- Extremely unlikely to realise this opportunity given the Island's limited capabilities
- Less likely to realise this opportunity with its existing levels of capabilities unless there was a sustained, concerted government effort
- A potential for several companies to realise this opportunity with a short term, concerted government effort
- A good chance for many companies to realise this opportunity with modest support from government
- An extensive range of existing companies have the capabilities to pursue this opportunity with limited government support

## Impact

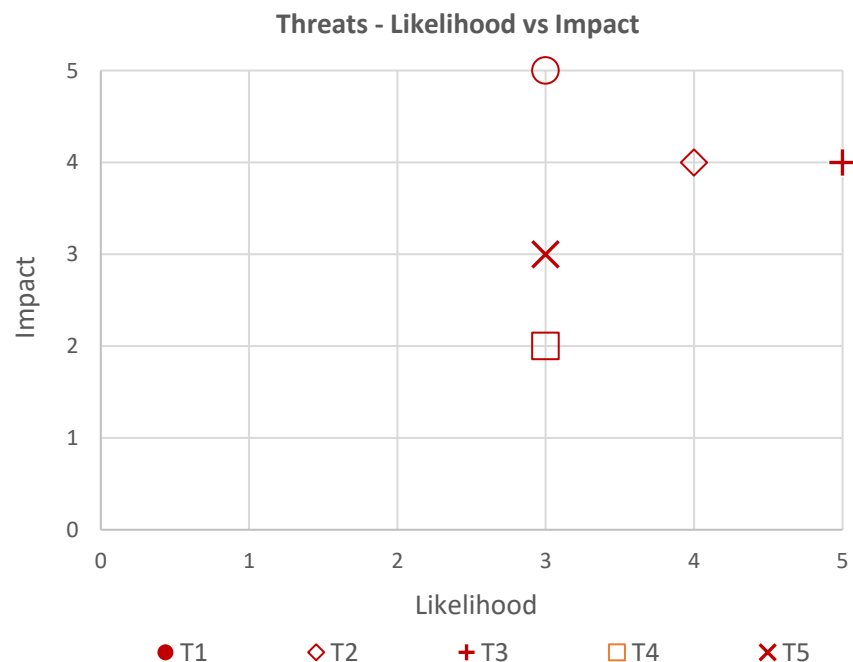
- Little to no impact on the E&M sector or the wider IOM economy
- Minor impact on the E&M sector or the wider IOM economy
- Reasonable impact on the E&M sector and wider economy, some businesses could benefit from this opportunity
- Significant impact on the E&M sector and the potential to grow a number of businesses on the Island
- Has the potential to reverse the trend of decline for the E&M industry and considerably benefit the IOM economy



# PRIORITISING THREATS



The biggest threat to the E&M sector is an irreversible trajectory of decline. Existing businesses could gradually exit the Island via consolidation or lack of transition plan, with no new pipeline of innovative E&M companies coming through.



**Likelihood:** The likelihood of this threat occurring on the Isle of Man

**Impact:** The impact on the E&M sector and wider economy of this threat

ID	Strength Description	Likelihood	Impact	Priority Score
T1	Consolidation of operations from multinational firms away from the IOM	3	5	15
T2	Specialised businesses with a reliance on 1 or 2 individuals fade away due to a lack of transition planning	4	4	16
T3	Growth opportunities being missed due to lengthy decision-making processes vs competitor regions	5	4	20
T4	Inability to create or access institutions that exploit and diffuse innovation to create new businesses / products / services	3	2	6
T5	Existing engineering skills provision is cut back as there isn't the critical mass to justify the facilities	3	3	9

## Likelihood

- 1 Extremely unlikely this threat will materialise
- 2 Unlikely this threat to materialises but can be managed by the IOM
- 3 A potential chance this threat could materialise, needs a short-term action plan to tackle it.
- 4 A significant chance this threat could materialise, needs to be addressed relatively soon
- 5 Very likely this threat will materialise unless immediate government and industry action is taken

## Impact

- 1 Little to no impact on the E&M sector or the wider IOM economy
- 2 Minor impact on the E&M sector or the wider IOM economy
- 3 Reasonable impact on the E&M sector and wider economy, some businesses could be negatively affected
- 4 Significant impact on the E&M sector and the potential to negatively affect a number of businesses on the Island
- 5 Has the potential to accelerate the decline for the E&M industry and threaten the future of E&M on the Island

# POTENTIAL GROWTH INITIATIVES FOR THE ISLE OF MAN



By mapping the strengths and weaknesses against the opportunities and threats, **four different types of growth initiatives** emerge alongside a handful of cross-cutting initiatives. These are presented in the following section.

	Opportunities	Threats
Strengths	<b>Offensive Initiatives</b> How to leverage strengths to pursue opportunities	<b>Defensive Initiatives</b> How to leverage strengths to guard against potential threats
Weaknesses	<b>Strengthening Initiatives</b> How to improve upon weaknesses to pursue opportunities	<b>Survival Initiatives</b> How to improve upon weaknesses to guard against potential threats
Enabling / cross-cutting initiatives to improve general E&M sector performance		

# POTENTIAL GROWTH INITIATIVES



# OFFENSIVE INITIATIVES



The first area of potential growth initiatives presented are offensive initiatives, based on strengths and opportunities.

Opportunities					
Capitalise on the growing cleantech sector by enabling E&M businesses to become suppliers in that transition <b>(15)</b>	Understand how digitalisation, data and AI could enhance the performance of E&M and create new opportunities <b>(14)</b>	Enhance opportunities in government aligned services like defence <b>(13.5)</b>	Explore opportunities in government aligned services like energy <b>(12)</b>	Explore opportunities in government aligned services like health <b>(7.5)</b>	Stimulate further intra-Island collaboration between the E&M sector and with the wider Isle of Man economy <b>(6)</b>
Offensive Initiatives					
Strengths	A strong base of existing businesses on the Island competing globally in high value areas <b>(15)</b>	<ul style="list-style-type: none"> <li>Conduct an extensive value chain mapping exercise of E&amp;M firms to understand which manufacturing processes and products could transition to new markets (e.g. defence, energy, health and cleantech).</li> <li>Initial mentorship support that identifies low-cost, low-risk methods to quickly implement digital technologies using affordable off-the-shelf kit.</li> <li>Establish an IoM version of the UK's Clean Growth Fund which crowds in private sector, investor and government capital to accelerate businesses capabilities in the cleantech supply chain.</li> <li>Develop a joint strategy with Digital Isle of Man to identify future growth areas that cut across digital and E&amp;M.</li> <li>Establish a technology licensing and IP advisory within Business Isle of Man to accelerate growth of companies and capture the value of IP generated on the Island.</li> <li>Aggressively market the UN Biosphere status to clean tech start-ups and certain business owners as a reason to relocate to the Isle of Man. Potentially even starting a UN Biosphere grant competition to attract FDI into the Island.</li> <li>Explore synergies between medicinal cannabis and sustainable construction materials, potentially using industrial hemp as insulation material for on Island and export.</li> </ul>			
	Strong capabilities in digital technologies and sectors which could help augment E&M capability <b>(14)</b>				
	A compelling location for high-net-worth individuals to relocate to <b>(12)</b>				
	Good industry-college relationship with courses suited for entry level E&M workers <b>(9)</b>				
	A critical mass of entrepreneurs who would like to set up a greater E&M footprint on the IoM <b>(8)</b>				
	Relatively easy access to decision makers <b>(6)</b>				



# STRENGTHENING INITIATIVES



The second area of potential growth initiatives presented are strengthening initiatives, based on weaknesses and opportunities.

Opportunities					
Capitalise on the growing cleantech sector by enabling E&M businesses to become suppliers in that transition <b>(15)</b>	Understand how digitalisation, data and AI could enhance the performance of E&M and create new opportunities <b>(14)</b>	Enhance opportunities in government aligned services like defence <b>(13.5)</b>	Explore opportunities in government aligned services like energy <b>(12)</b>	Explore opportunities in government aligned services like health <b>(7.5)</b>	Stimulate further intra-Island collaboration between the E&M sector and with the wider Isle of Man economy <b>(6)</b>

Weaknesses	Cultivating & attracting the right talent to work on the Island and in the E&M sector <b>(17.5)</b>	<p>Strengthening Initiatives</p> <ul style="list-style-type: none"> <li>Establish stronger relationships with UK E&amp;M educational institutions, exploring options to have PhD funded students working within E&amp;M businesses for a year.</li> <li>Redesign the grant system to focus on higher risk, higher reward investments that accelerate the IoM's E&amp;M capability in core growth sectors.</li> <li>Give E&amp;M start-ups and smaller business dedicated grants and mentorship from experts to anchor R&amp;D or manufacturing capability on the Island in key opportunity areas (defence, energy, health and cleantech)</li> <li>Establish an intra-Island innovation exchange where companies can pose innovation challenges and other companies can provide solutions.</li> <li>Identify opportunities where E&amp;M businesses could contribute towards the IoM's net zero strategy (i.e. supply components for wind turbines / solar arrays).</li> <li>IoM Government to create an equivalent of the UK Infrastructure Bank or British Business Bank to help crowd in private sector finance into E&amp;M businesses and support critical industry led infrastructure projects like industrial facilities, energy generation and waste management.</li> </ul>
	Difficulty accessing finance which is hampering growth <b>(16)</b>	
	The length of time to acquire new facilities or expand existing facilities <b>(15)</b>	
	Greater logistics challenges narrow the scope of products that could be manufactured on the Island <b>(7)</b>	
	The fundamental costs on the Isle of Man are higher vs the UK which is putting a strain on profitability <b>(6)</b>	
	Lack of university or innovation centre hinders ability to spin out innovations and anchor talent <b>(5)</b>	



# DEFENSIVE INITIATIVES



The third area of potential growth initiatives presented are defensive initiatives, based on strengths and threats.

Threats				
Growth opportunities being missed due to delays and lack of unified direction vs competitor regions <b>(20)</b>	Specialised businesses with a reliance on 1 or 2 individuals fade away due to a lack of transition planning <b>(16)</b>	Consolidation of operations from multinational firms away from the IoM <b>(15)</b>	Existing engineering skills provision is cut back as there isn't the critical mass to justify the facilities <b>(9)</b>	Inability to create or leverage institutions that exploit and diffuse innovation to create new businesses / products / services <b>(6)</b>

Strengths	Defensive Initiatives	
	A strong base of existing businesses on the Island competing globally in high value areas <b>(15)</b>	<ul style="list-style-type: none"> <li>Regularly engage with representatives of the E&amp;M parent companies to understand their growth plans, strategy and how government can protect existing assets.</li> <li>Explore new models of financing and delivering E&amp;M training that leverages both public and private sector investment.</li> <li>Leverage digital technologies to accelerate the planning and application processes to enable businesses to access facilities.</li> <li>Actively target FDI opportunities in luxury / bespoke products, with relatively simplistic logistics that are owned by high-net-worth individuals.</li> <li>government owned innovation campus that acts as an R&amp;D cluster for existing E&amp;M businesses and as a landing pad for key target companies to anchor initial E&amp;M footprints. This could be in or located next to the AMTC to provide students with access to advanced manufacturing equipment / processes.</li> <li>Better promote and campaign on the range of tax incentives on the Island clearly demonstrating the tax savings vs establishing on the UK.</li> <li>Establish an interactive, online map for businesses to see available facilities on the Island that provides key data points such as costs, energy connections, proximity to amenities and other businesses etc.</li> </ul>
	Strong capabilities in digital technologies and sectors which could help augment E&M capability <b>(14)</b>	
	A compelling location for high-net-worth individuals to relocate to <b>(12)</b>	
	Good industry-college relationship with courses suited for entry level E&M workers <b>(9)</b>	
	A critical mass of entrepreneurs who would like to set up a greater E&M footprint on the IoM <b>(8)</b>	
	Relatively easy access to decision makers <b>(6)</b>	

# SURVIVAL INITIATIVES



The fourth area of potential growth initiatives presented are survival initiatives, based on weaknesses and threats.

Threats				
Growth opportunities being missed due to delays and lack of unified direction vs competitor regions <b>(20)</b>	Specialised businesses with a reliance on 1 or 2 individuals fade away due to a lack of transition planning <b>(16)</b>	Consolidation of operations from multinational firms away from the IoM <b>(15)</b>	Existing engineering skills provision is cut back as there isn't the critical mass to justify the facilities <b>(9)</b>	Inability to create or leverage institutions that exploit and diffuse innovation to create new businesses / products / services <b>(6)</b>

Survival Initiatives	
Weaknesses	<ul style="list-style-type: none"> <li>Dedicated Locate Isle of Man campaign aimed at attracting young professionals in E&amp;M highlighting the safety, quality of life, improving childcare provision, and tax benefits.</li> <li>Offer the E&amp;M sector easy to access, low / zero interest loans for new capital equipment and facility expansion.</li> <li>Ensure the future Scale-Up programme is part of a wider, joined-up funding network that can support SMEs and existing businesses throughout the product commercialisation journey.</li> <li>Joint DfE-Innovate UK events or funding programmes that connects UK and IoM organisations to strengthen collaboration and promote new products / services.</li> <li>Foster a relationship with a UK university with the goal of establish a subsidiary location / innovation centre, potentially within the Isle of Man Freeport.</li> <li>Exploring innovative energy generation and financing models that reduce the costs and emissions of energy for businesses and residents.</li> <li>Detailed modelling of the energy requirements for the E&amp;M sector to understand the baseload and spikes to negotiate a tariff that works for the sector.</li> <li>Establish a small, cross-departmental taskforce between DfE, DoI and DEFA that accelerates decisions on issues such as access to facilities and energy planning and connections.</li> </ul>

Weaknesses	Cultivating & attracting the right talent to work on the Island and in the E&M sector <b>(17.5)</b>
	Difficulty accessing finance which is hampering growth <b>(16)</b>
	The length of time to acquire new facilities or expand existing facilities <b>(15)</b>
	Greater logistics challenges narrow the scope of products that could be manufactured on the Island <b>(7)</b>
	The fundamental costs on the Isle of Man are higher vs the UK which is putting a strain on profitability <b>(6)</b>
	Lack of university or innovation centre hinders ability to spin out innovations and anchor talent <b>(5)</b>

## ■ ENABLING AND CROSS-CUTTING INITIATIVES



Further enabling and cross-cutting initiatives emerged that could support the E&M sector in the IOM, with many relating to how the IOM Government monitors activity and organises its interactions with the E&M sector.

### **Start tracking more data points that indicate the health of the E&M sector and wider economy**

Through the regional analysis it emerged that several key indicators to measure the health of the E&M sector and wider economy were missing for the IOM.

### **Align the classification of the E&M sector more closely with UK SIC codes**

It emerged during the stakeholder feedback that there is a conflation of the E&M sector with the precision engineering and aerospace companies on the Island.

### **Consider separating E&M and other sectors out of the Business Isle of Man structure to form “Producers Isle of Man” to ensure the group better reflects common challenges**

It emerged during the stakeholder feedback that the breadth of activity can often dilute focus with many topics and discussions not relevant for the E&M sector.

### **Enable DfE’s E&M team to become more proactive in its business development approach**

It was felt more allowances and incentives were created for larger businesses at the expense of enabling growth opportunities for smaller businesses. Also, compared to the digital team, there is less focus on attracting FDI opportunities.

## CONCLUDING REMARKS



**Key sector strengths.** Companies in general manufacturing are outperforming adjacent sectors in the broader production category and are on par with elements of the digital, insurance, and finance sectors. This is mainly due to established, large companies that have carved out profitable niches and can innovate to meet rigorous customer demands. Many of the E&M businesses offer unique value and quality highlighting the importance of specialised, niche markets for the Island. Finally, the IOM is also an attractive place for people to relocate to, offering some attractive personal financial incentives, very low corporate taxation rates, combined with an overall better quality of life in terms of safety and scenery.

**Key sector weaknesses.** A range of deep-rooted and structural challenges are present which include lack of skills especially in middle management roles, difficulty in accessing and growing facilities, and finally lack of access to finance, both from government and other sources such as private investors.

**Key resolutions.** Potential growth initiatives identified to grow the IOM E&M sector range from accelerating the activities in government aligned services such as energy, defence, and health, to a reorientation of E&M activity to support the global opportunity presented by the growing cleantech market. In addition, given the strong digital sector across multiple disciplines, the Island has a unique opportunity to leapfrog many regions and position itself as a hub of activity at the intersection of digital and E&M sector.

**Next steps.** While Phase One has provided an evidence base for a 10-year E&M growth strategy, an E&M roadmap is only viable if it is created by the stakeholders who are responsible for delivery. Therefore, Phase Two is crucial not only for gaining feedback on the Phase One outputs, but to actively generate a 10-year strategy that all E&M stakeholders can take ownership of.