

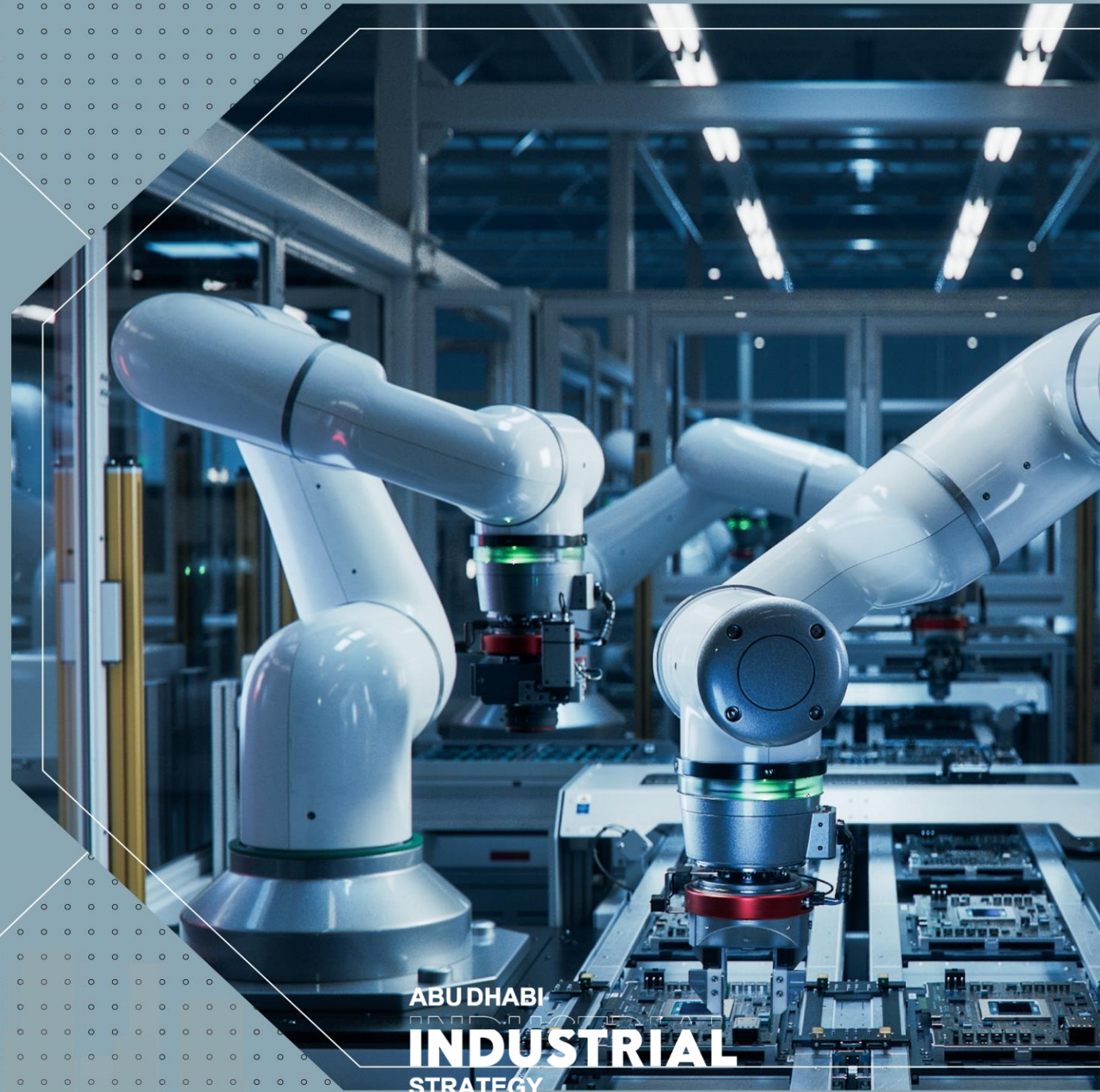
AI and Sentiment-Driven Policies for Industry 4.0 Transformation

The Smart Manufacturing Acceleration Program

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Dr Ing. Antonio Feraco
Senior Advisor Industrial Strategy
Abu Dhabi Department of Economic Development
Abu Dhabi Investment Office – ADIO

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ABU DHABI
INDUSTRIAL
STRATEGY

WE ARE PART OF ABU DHABI INVESTMENT OFFICE (ADIO)

Invest with us



We are your growth partner to make it easier to thrive in Abu Dhabi – Invest with Us

We are the Abu Dhabi Investment Office (ADIO), leading a new era of transformation through economic orchestration in Abu Dhabi by:

- Driving strategic investments to position Abu Dhabi as a global hub for business, innovation, and talent
- **Nurturing industries of tomorrow while providing world-class support to local and international investors**
- **Empowering investors and businesses of all sizes with tailored resources for long-term success**
- Welcoming investors, talent and visionaries to our thriving ecosystem
- **Championing private sector growth and economic diversification**

We enhance trade and support the growth of local commercial, industrial, and digital enterprises from start-up to IPO and beyond



Ahmed Jasim Al Zaabi
Chairman,
Abu Dhabi Department of
Economic Development
(ADDED)



Badr Al-Olama
Director General,
Abu Dhabi Investment
Office (ADIO)



ABU DHABI PRIORITISES EASE OF DOING BUSINESS

Abu Dhabi offers state of art infrastructure, diverse talent pool and favourable business conditions for investors to flourish

Infrastructure



1st

Best airport at Arrivals globally by ASQ



2nd

UAE's ranking global basic infrastructure competitive index 2023



3rd

UAE's ranking global basic infrastructure competitive index 2023



~44

Multidisciplinary free zones offering 100% rebate on corporate & income tax and mature business ecosystem

Talent



2nd

UAE talent pool in areas such as leadership, management, strategy & operations



10th

UAE's ranking in global immigration ensuring diversity of talent



19th

MBZUAI's¹ global rank for AI, computer vision, machine learning and natural language processing

(1) Mohammed Bin Zayed University of Artificial Intelligence

Source: AD Airports, Etihad Rails, DB 2020 report, Datacenter Map, Coursera, ADDED, World Bank, ADIO and press release



As part of ADIO's Trade and Enterprise function, we aim to deliver on:
ABU DHABI INDUSTRIAL STRATEGY (ADIS)
To make Abu Dhabi the most competitive industrial hub in the region

Key Objectives



Double the manufacturing sector contribution to AED 178 bn by 2031



Create more than 13 thousand knowledge-based jobs



Enhance trading with global markets

Strategic Programmes



Ecosystem Enablement



Industry 4.0



Homegrown Supply Chain



Value Chain Development



Industrial Talent



Circular Economy



WE ARE INCREASING COST COMPETITIVENESS

Abu Dhabi offers state of art infrastructure, diverse talent pool and favourable business conditions for investors to flourish



Energy Support Programme (Electricity)

Increase Abu Dhabi's cost competitiveness by incentivising electricity tariffs to qualifying industrial companies

Up to 30% incentive on electricity tariffs



Energy Support Programme (Electricity)

Increase Abu Dhabi's cost competitiveness by incentivising electricity tariffs to qualifying industrial companies

Up to 35% incentive on gas prices



Land Rent Support Programme

Attract new industrial companies to Abu Dhabi through long-term incentivised land rents to companies aligned with AD's priority sub-sectors

Up to 80% incentive on land rent prices



Smart Manufacturing Acceleration Programme

Incentivise on consultancy fees and technology upgrades to encourage the transformation towards industry 4.0 applications.

Up to co-investment of AED 10 mn



The Industry 4.0 Pillar of ADIS

To boost Abu Dhabi specific economy, we engineered 2 initiatives to ensure proper and impactful I4.0 adoption

Best practices from leading industrialized and tech driven countries (Korea, Germany, Singapore and USA) have been tailored to satisfy Abu Dhabi Industrial Environment (with strong alignment with MOIAT)



Enablement

1

The Smart Manufacturing Competence Centre to enable the knowledge and proper adoption of I4.0 as well as the creation of IPs

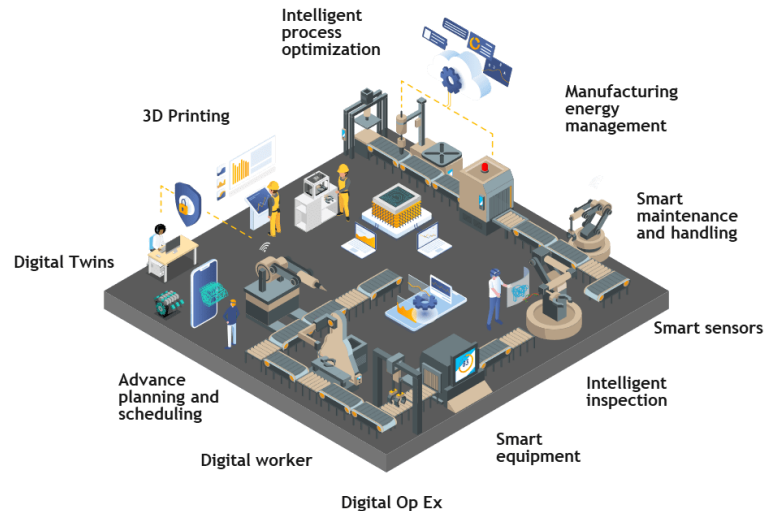


Incentive



2

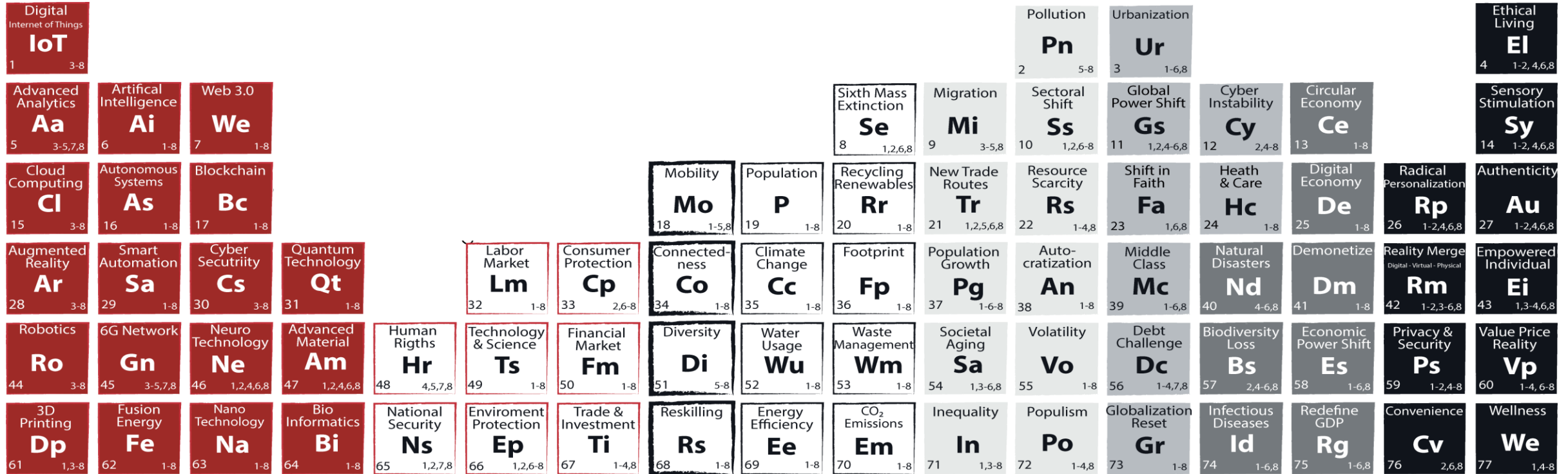
The Smart Manufacturing Acceleration Program to boost the adoption and implementation of I4.0 SW and HW in companies to increase their productivity and digitizing their processes, as well as creating new skilled jobs





Smart Manufacturing Acceleration Programme

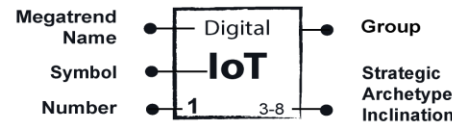
From the integration of multiple technologies to the enabling role of people, I4.0 leads the way to achieve many benefits beyond productivity...



Group

- Technology
- Regulatory
- Workforce
- Environment
- Globalization
- Demographic
- Economic
- Consumer

Element



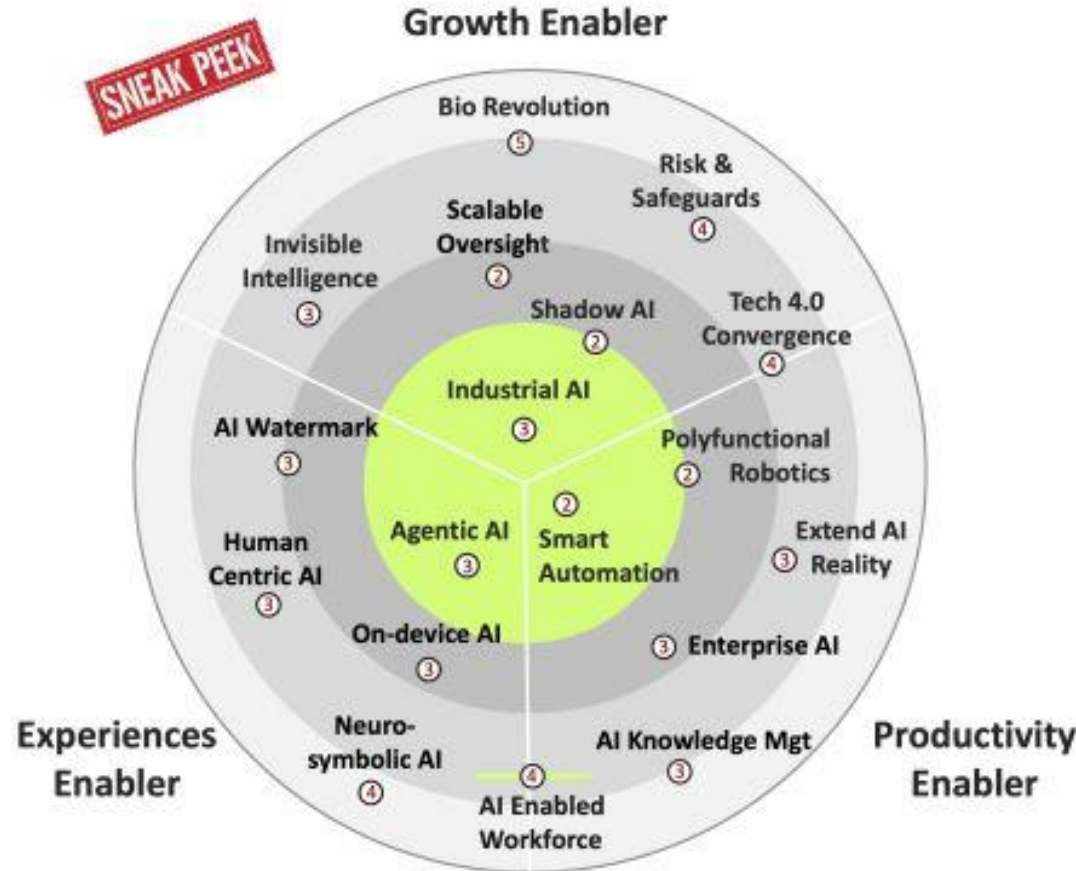
Strategic Archetype Inclination

- 1. Growth
- 2. Competitiveness
- 3. Cost Efficiency
- 4. Performance
- 5. Operational Excellence
- 6. Service or Product
- 7. Lower Risk
- 8. Sustainable Dev. Goals



The Role of AI in SMAP

A proper transformation will never be optimal without leveraging on the multi facets benefits AI can bring



Artificial Intelligence TrendRadar 2025

The AI Trend Impact Radar™ 2025 is designed for executive teams to examine emerging trends in relation to the disruption index, correlating maturity, impact, and adoption difficulty to support strategic decision-making.

This research was led by the *Institute of Strategic Intelligence* in collaboration with leading researchers from the top institutions:

- MIT Computer Science and AI Laboratory
- Carnegie Mellon University Institute of Robotics & ML
- Stanford Institute for Human Centered AI
- Cambridge Leverhulme Future of Intelligence Centre
- ETH AI and Digital Technology

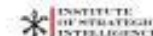
Maturity Range

- 4-6 years
- 2-4 years
- 1-2 years
- Now

Disruption Index

Impact	Adaptability
Minor 1	Easy
Moderate 2	Medium
Major 3	Tough
Severe 4	Hard
Serious 5	Very Hard

© 2025 Prof. Henrik von Scheel
Institute of Strategic Intelligence





The Role of AI in SMAP

Envisioned potential applications of Sentiment Analysis in Industrial Context

Employee Feedback and Engagement

Application: Analyze employee survey responses, open-ended feedback, or internal communication channels (e.g., chat platforms or emails).

Benefit:

- Identify areas of dissatisfaction or low morale.
- Track the effectiveness of initiatives aimed at improving workplace conditions.

Customer Feedback on Manufactured Products

Application: Process customer reviews, complaints, and social media mentions to assess sentiment about product quality, delivery, or pricing.

Benefit:

- Improve product design on common pain points.
- Monitor real-time customer sentiment trends for proactive quality management.

Quality Assurance Feedback

Application: Analyze comments made during quality control audits or product inspections.

Benefit:

- Identify patterns of dissatisfaction related to certain production processes or components.
- Optimize production workflows to reduce quality defects.

Shop Floor Communication

Application: Process verbal or written feedback from shop floor operators and technicians during daily operations or shift handovers.

Benefit:

- Detect signs of frustration or concern that may signal equipment issues, inefficiencies, or safety risks.
- Facilitate proactive intervention to improve productivity.

Safety and Risk Assessment

Application: Evaluate written incident reports, safety feedback, or voice logs for negative sentiment related to working conditions or near-misses.

Benefit:

- Pinpoint areas needing safety improvements.
- Reduce accidents by addressing recurring dissatisfaction or concerns.

Digital Transformation Projects

Application: Evaluate the sentiment of employees towards digital tools (like MES, ERP, or IoT systems) introduced during IT/OT convergence.

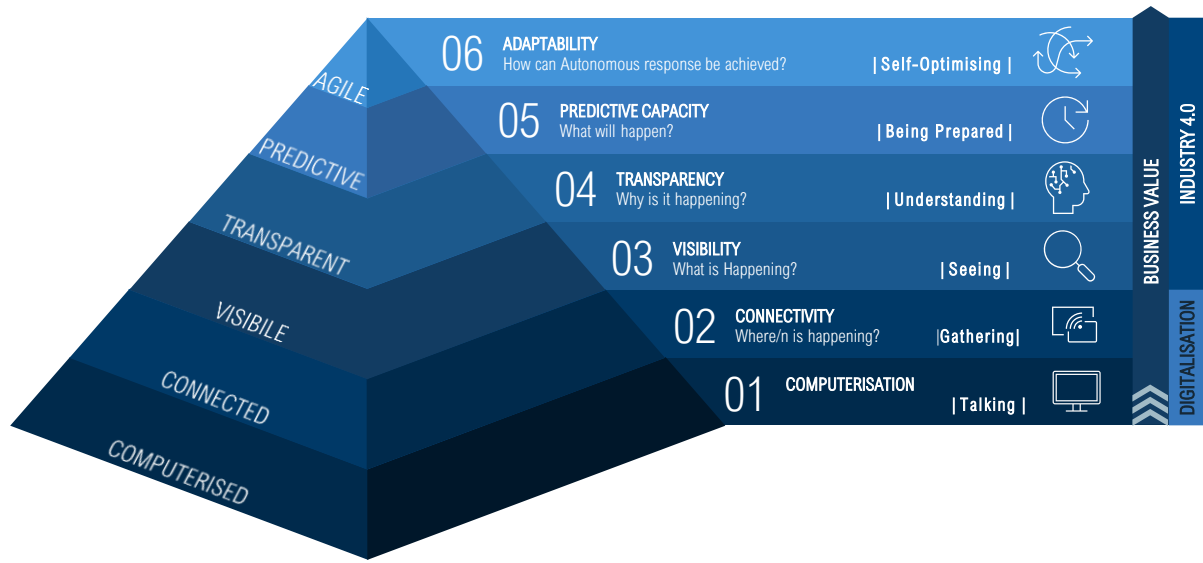
Benefit:

- Tailor training programs and adoption strategies to mitigate resistance.
- Ensure a smoother transition to smart manufacturing technologies.



Smart Manufacturing Acceleration Programme

Transforming manufacturing operation will directly impact on the company's productivity



Becoming a Data Driven Organization

<p>Contributes to building a resilience competitive advantage for the manufacturing sector</p>	<p>Builds technical capabilities required to shift towards 4.0 industry (high skilled jobs)</p>
<p>Boosts the Productivity in the industrial Sector</p>	<p>Accelerates business growth through adoption of Industry 4.0 technologies and processes</p>

Smart Manufacturing Acceleration Programme



The journey to initiate implementation ... ~2 months

Assessment Criteria



Targeted Subsectors

**FALCON ECONOMY
MANUFACTURERS**

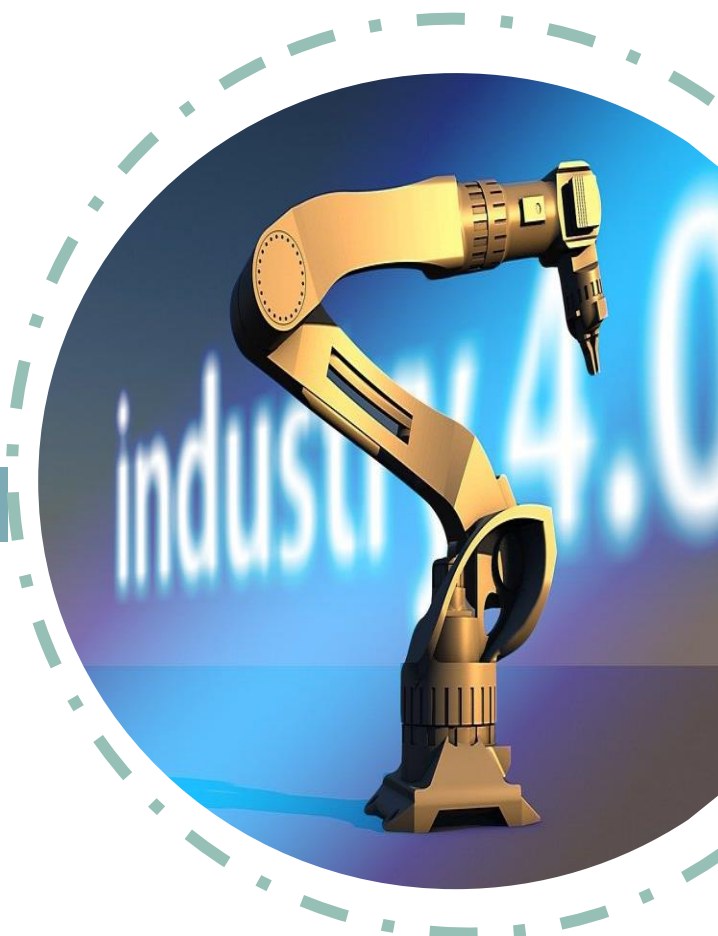
Program Benefits



Consultancy Fees
AED 50K



Hardware & Software
Up-to AED 10 Mn



Smart Manufacturing Acceleration Programme



The Technical Assessment will be based on the below criteria

LEGITIMACY & DESIRABILITY

- Fit with manufacturers' challenges/opportunities and with the whole team
- Desirable (identify unsatisfactory current solution)

FEASIBILITY

- Technical feasibility for the technology to be implemented
- Ensure full utilization and integration from the identified solutions

ALIGNMENT

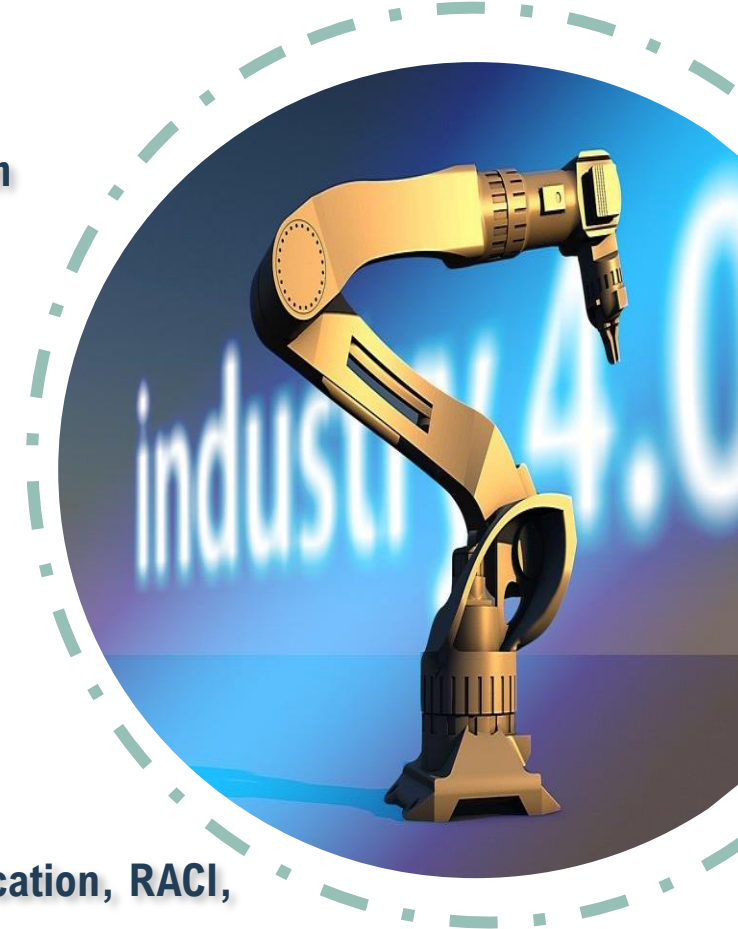
- Alignment with I4.0 concepts and pragmatic targeted maturity (ITTI)
- Aligned with Abu Dhabi Industrial Strategy and Ensure a clear efficiency improvement

IMPACT

- Clear impact on Manufacturers' financial, environmental and social sustainability

IMPLEMENTATION

- Sound implementation plan with milestones, risk mitigation, budget allocation, RACI,
- Official quotation from technology vendors



Smart Manufacturing Acceleration Programme



All criteria must be addressed in a structured Technology Roadmap

The Roadmap Framework



Current State



Business Process Mapping



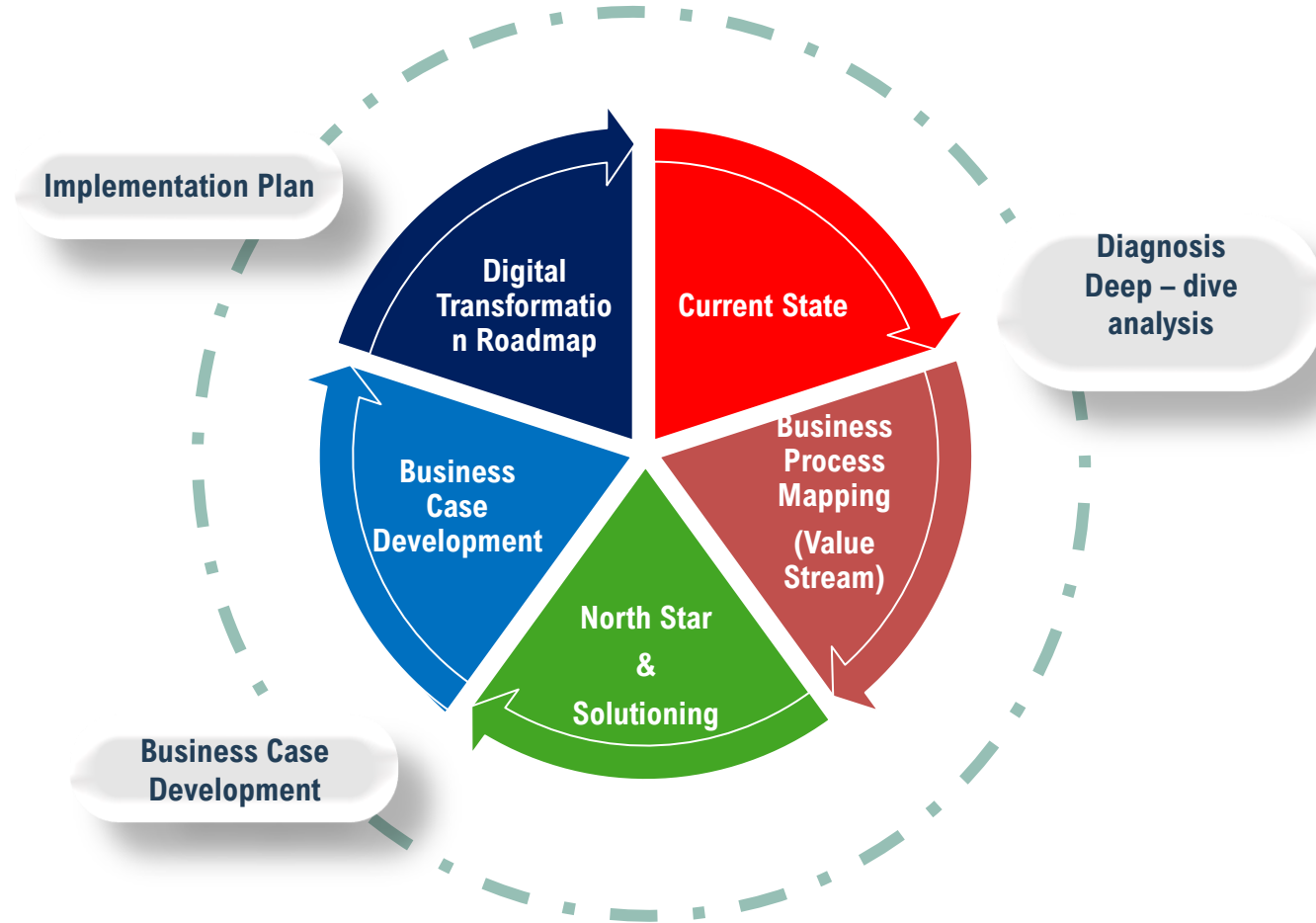
Business Case Development



North Star and Solutioning



Industry 4.0 Implementation Plan





Thank you