



UNITED ARAB EMIRATES
MINISTRY OF INDUSTRY
& ADVANCED TECHNOLOGY

مؤشر
التحول
التكنولوجي
الصناعي



INDUSTRIAL
TECHNOLOGY
TRANSFORMATION
INDEX

Industrial Technology Transformation Index (ITTI)

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The objectives of Operation 300Bn provide the foundation for the index vision.



Build an attractive **business environment**



Support **competitiveness** of national industries



Accelerate **advanced technology** adoption



Position UAE as **leader** in **industries of future**

The Technology Transformation Program (TTP) launched 5 transformation initiatives.



Industrial Technology Transformation Index (ITTI)

The first digital maturity tool in the region to measure technology transformation and sustainable practices



Industrial Enablement Centers

Centers created to empower and build capacities within the industrial sector



The National Advanced Technology Testbed program

A platform that allows startups and tech developers to test their innovations in a real-life environment



Advanced Technology Incentives

Diverse and innovative financing solutions to enable the adoption and development of advanced technology



Factory of the Future Award

An annual award to recognize distinguished factories in adopting advanced technology

The Industrial Technology Transformation Index (ITTI)

is a tool that aims to measure the digital maturity of manufacturing plants.

How is ITTI different?



- Integrates 4IR with **sustainability**
- Considers dimensions across the **entire manufacturing value chain**
- Includes **1-day ITTI assessments**

How will ITTI benefit the manufacturing sector?



Assessors develop a detailed report, providing recommendations on actions to help manufacturers identify areas of improvement.



Manufacturers are provided with recommendations on how and where to adopt technology & enhance their maturity.



Based on the results of the ITTI assessment, incentives including the In-Country Value (ICV) bonus and Golden Visa are applied.

▶ We assessed numerous companies with the ITTI framework in order to provide a bottom-up view of the UAE's manufacturing sector maturity.



150+
MANUFACTURING COMPANIES
ASSESSED USING THE ITTI FRAMEWORK

Five principles have informed the design of ITTI.



Intuitive

Easily
understandable
& explainable



Insightful

Offers a
meaningful view of
current maturity



Forward Looking

Incorporates latest
I4.0 trends



Modular

Assesses relevant
categories

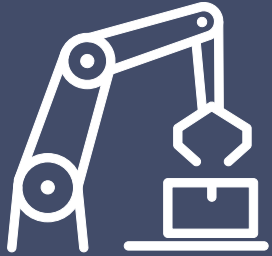


Swift

Does not disrupt
company operations

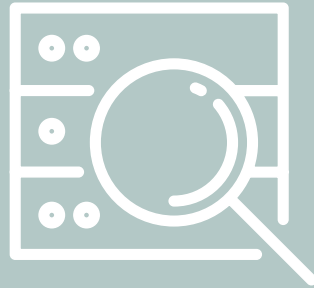


ITTI has 4 main goals.



IMPROVE

industry competitiveness
through technology adoption



ENABLE

evidence-based industrial
policy making



ACCELERATE

innovation in the
manufacturing community



PROMOTE

sustainability and efficient
resource management



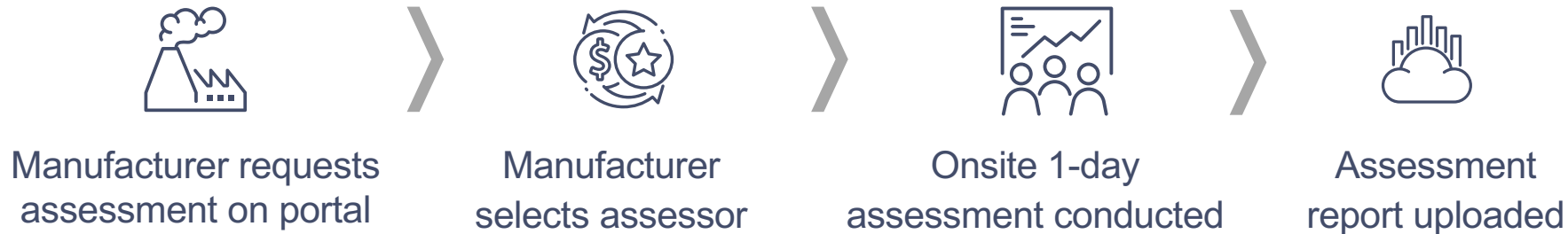
ITTI Assessment



ITTI assessment journey consists of 4 main steps.

Conducting an ITTI assessment is fairly easy and simple.

4 MAIN STEPS:

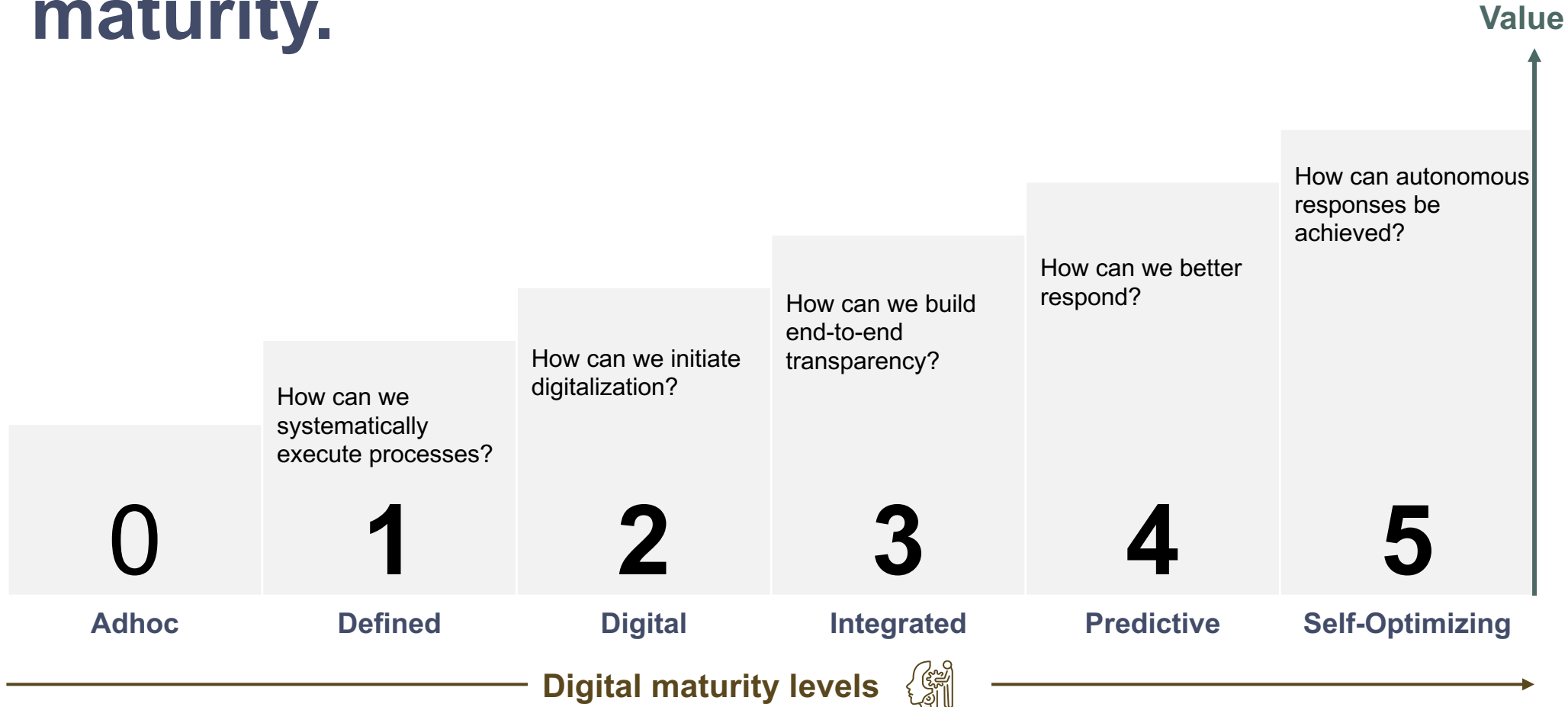


20 dimensions are developed along the manufacturing value chain.

R&D and Engineering	Marketing and sales	Supply Chain Management (inbound)	Manufacturing / Production	Supply Chain Management (outbound)	Customer Service
D1. Product Lifecycle Management	D2. Marketing and Sales	D3. Supply Chain Planning D4. Sourcing and Procurement D5. Warehouse Management D6. Logistics Management	D7. Production Planning and Scheduling D8. Production Execution D9. Utilities Management D10. Quality Management D11. Maintenance	D3. Supply Chain Planning D5. Warehouse Management D6. Logistics Management	D12. Customer Care and Service
Enterprise Administration	D13. Business Processes and Intelligence			D14. Technology Management	
Strategy and Organization	D15. I4.0 Strategy and Governance			D16. Digitally Fit Organization	
Sustainability	D17. Sustainability Strategy and Governance	D18. Material Circularity	D19. Water and Wastewater Management	D20. Emissions Management	



ITTI has a scoring system that reflects digital maturity.

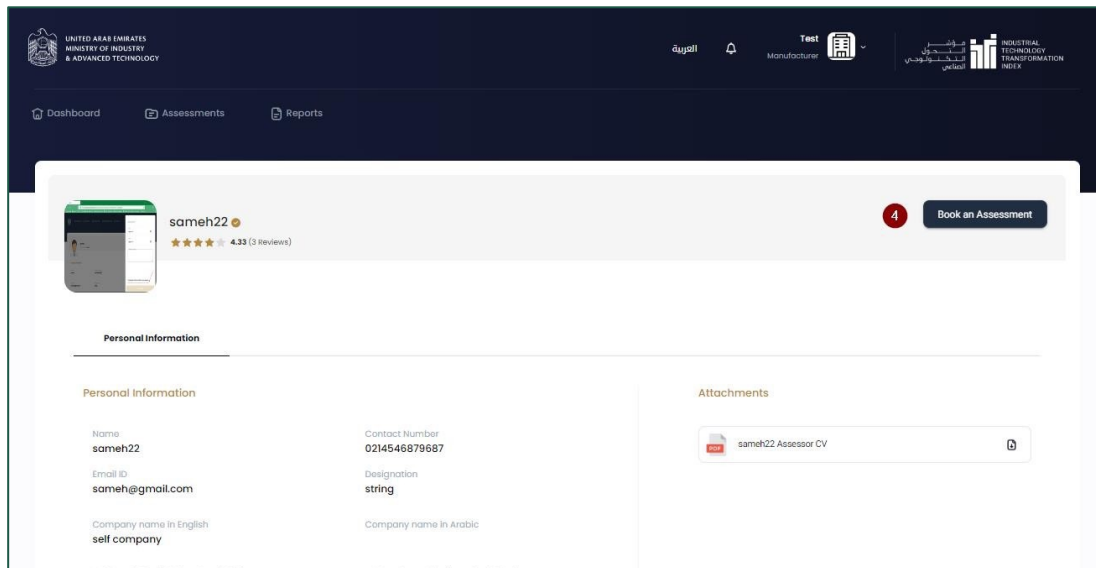


Overview

- Scale guides definition of digital maturity in a dimension
- I4.0 concepts are consistently addressed throughout the index
- Scale informs manufacturers on how to move from current level to the next

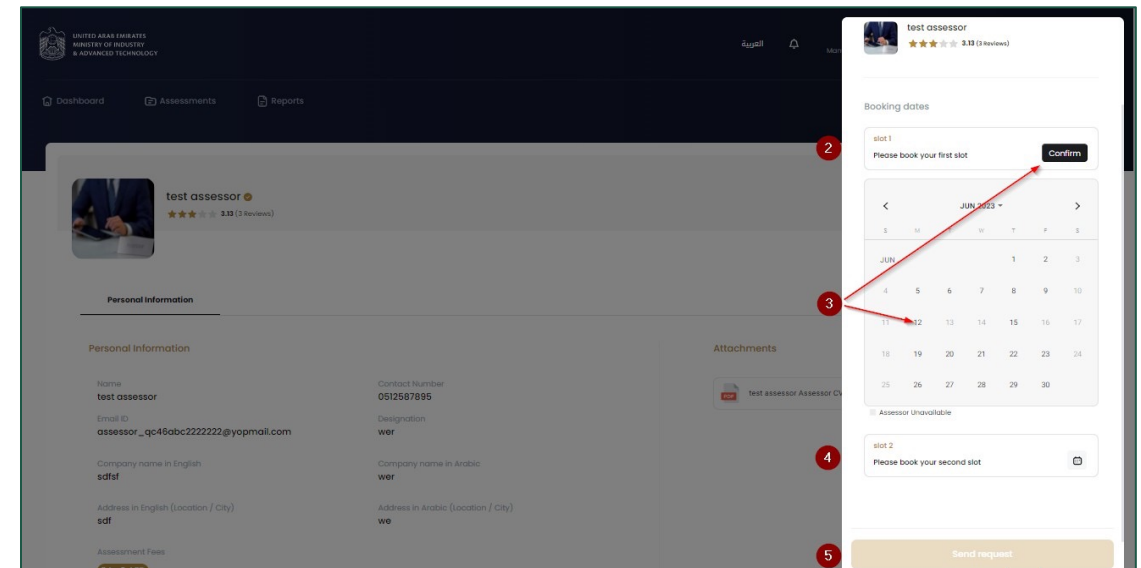
The ITTI assessment journey happens through the ITTI portal.

1. SCHEDULE ASSESSMENT & SELECT AN ASSESSOR



The screenshot shows the ITTI portal interface. At the top, there's a navigation bar with 'Dashboard', 'Assessments', and 'Reports'. Below this, a card for 'sameh22' (4.33 (3 Reviews)) is displayed. A red circle with the number '4' highlights the 'Book an Assessment' button. Below the card, the 'Personal Information' section is visible, containing fields for Name, Email ID, Contact Number, Designation, and Company name in English and Arabic. An 'Attachments' section shows a file named 'sameh22 Assessor CV'.

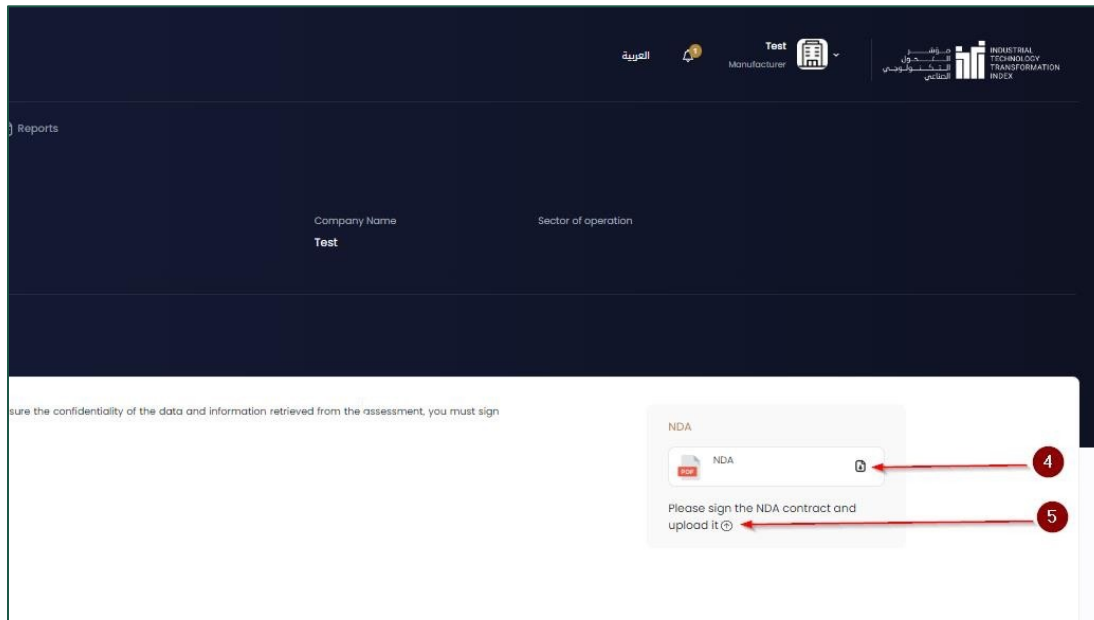
2. BOOKING AN ASSESSMENT SLOT



The screenshot shows the ITTI portal interface for booking an assessment slot. The assessor's profile 'test assessor' (3.13 (3 Reviews)) is displayed. A red circle with the number '2' highlights the 'Confirm' button. A red circle with the number '3' highlights the 'Booking dates' calendar. A red circle with the number '4' highlights the 'Attachments' section. A red circle with the number '5' highlights the 'Send request' button. The 'Booking dates' section shows a calendar for July 2023, with a red arrow pointing to the 'Confirm' button. The 'Attachments' section shows a file named 'test assessor Assessor CV'.

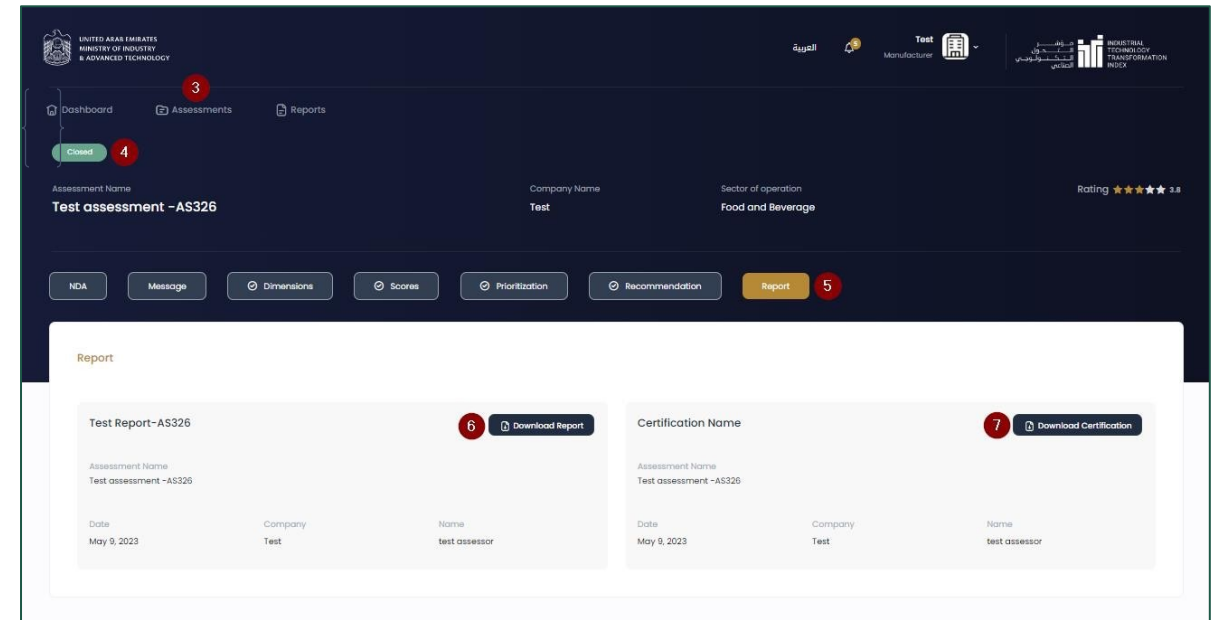
The ITTI assessment journey happens through the ITTI portal.

3. UPLOAD THE SIGNED NON-DISCLOSURE AGREEMENT (NDA)



The screenshot shows the ITTI portal interface. At the top, there are navigation tabs: 'العربية', 'Manufacturer', and 'Test'. The 'Test' tab is selected. Below the navigation bar, there is a header section with 'Company Name' and 'Sector of operation' fields. The 'Company Name' field contains the text 'Test'. Below this, there is a section titled 'NDA' with a text input field containing 'NDA' and a 'Download' button. Below the input field, there is a text prompt: 'Please sign the NDA contract and upload it'. Red arrows point from the 'Download' button and the text prompt to the 'NDA' input field, indicating the next steps in the process.

4. DOWNLOAD ASSESSMENT REPORT AND CERTIFICATION



The screenshot shows the ITTI portal interface. At the top, there are navigation tabs: 'العربية', 'Manufacturer', and 'Test'. The 'Test' tab is selected. Below the navigation bar, there is a header section with 'Company Name' and 'Sector of operation' fields. The 'Company Name' field contains the text 'Test'. Below this, there is a section titled 'Report' with a 'Download Report' button and a 'Download Certification' button. Red arrows point from these buttons to the 'Report' section, indicating the next steps in the process.

➔ This step comes after the assessment is completed.



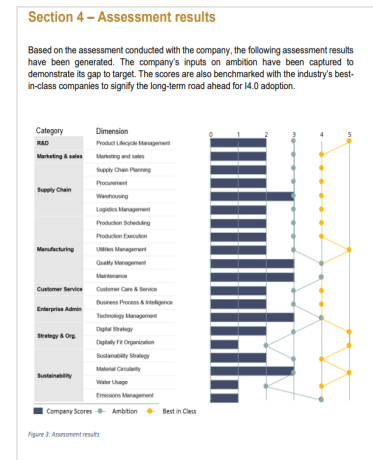
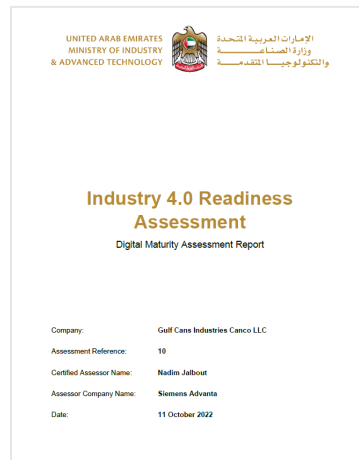
ITTI assessment report provides comprehensive results.



ASSESSMENT RESULTS



RECOMMENDATIONS



Section 5 – Recommendations

Based on the five selected based focus areas and in line with the company's current maturity, the dimensions that will drive the highest impact to AI Fatel will be

Focus Areas	In Focus
Time to Market	-
Sales Process Efficiency	Yes
Demand / Supply Planning Accuracy	-
Procurement Efficiency	Yes
Inventory Management	-
Time to Delivery	-
Production Planning & Scheduling Effectiveness	-
Production Flexibility	-
Manufacturing Process Efficiency	Yes
Utilities Optimization	-
Quality Improvement	-
Maintenance Management	Yes
Customer Satisfaction	-
Enterprise Process Digitalization	-
Cybersecurity	-
Digital Capabilities	Yes
Sustainability management	-

Table 1: Focus areas selected by the company

The 5 prioritized dimensions for the company to focus on are:

Reference	Category	Prioritized dimension
1	Strategy and Organization	Digitally Fit Organization
2	Manufacturing	Production Execution
3	Manufacturing	Maintenance Management
4	Customer Service	Customer Care & Service
5	Manufacturing	Quality Management

Table 2: Prioritized dimensions

Associated recommendations with the prioritized dimensions

- Quality Management**
 - Completely digitize end-to-end quality data:** Currently, quality data is either being stored temporarily on the testing equipment (on excel) or on paper logs before being uploaded into ERP. Since the production machines are churning batches within minutes, it is imperative to have immediate intervention, as and when a quality test has failed, to avoid further faulty batches from getting manufactured. This would not just help with the overall throughput but would also help save RMI PM costs. We suggest having a real-time digitized data flow between testing equipment and the ERP because the faster the test results are available in the system, the quicker will be the root cause analysis and therefore the defect mitigation.
 - Implement real time quality dashboards** – Once a real-time data flow with the ERP has been established, real-time dashboards can be built on top of this data to promote transparency with better visualization and to enable faster decision making.
 - Implement closed loop quality management** – Taking quality management process a step further, the real time data from quality testing can be integrated with the machine process parameters to implement a closed loop quality management. When this is being done as part of the core processes would be game changing for the overall process yield.
- Production Planning and Scheduling**
 - Automation of production planning and scheduling:** Currently, the definition of production plan and production schedule involves a complex calculation done manually – with considerations for type of product, processing time, line availability, raw material availability maintenance schedules and involvement of multiple teams such as planning, sales, production, quality, maintenance etc. We recommend the company to consider implementation of automated production planning and scheduling software. Such software can take into consideration the variables such as product processing time, order priority, available capacity and previously scheduled orders, maintenance schedule to dynamically provide the production plans and production schedules. In the event of an urgent order / breakdown, the plans can be automatically adjusted with limited manual intervention. Such automated production planning and scheduling software can integrate with ERP to provide production plans and schedules while considering any changes to supply plan as well as constraints such as raw material / FG availability, manpower availability, capacity. These schedules can then be adjusted by the planning team as required.

Digital Maturity Assessment Report 21

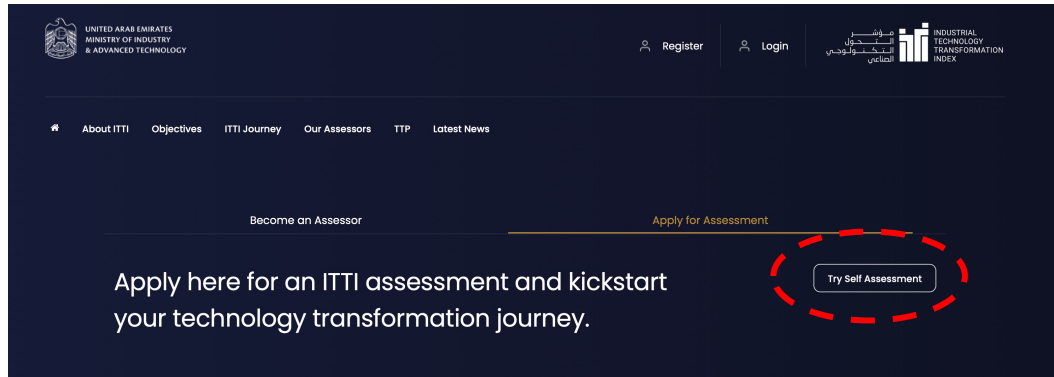
- Digital maturity assessment conducted in 1 day
- Awareness on I4.0 concepts and technologies
- Results with company ambitions and best-in-class benchmarks

- 5 prioritized dimensions that deliver the highest impact
- Detailed recommendations to support technology adoption
- Total company score to facilitate linkage with schemes

ITTI self-assessment is live and can be conducted.



Manufacturers can conduct self-assessment to get an overview of the ITTI assessment journey.



The screenshot shows the ITTI self-assessment portal. At the top, there is a navigation bar with the United Arab Emirates Ministry of Industry & Advanced Technology logo, 'Register' and 'Login' buttons, and the ITTI logo. Below the navigation bar, there is a menu with links: 'About ITTI', 'Objectives', 'ITTI Journey', 'Our Assessors', 'TTP', and 'Latest News'. The main content area has two buttons: 'Become an Assessor' and 'Apply for Assessment'. Below these buttons, there is a text prompt: 'Apply here for an ITTI assessment and kickstart your technology transformation journey.' A red dashed circle highlights the 'Try Self Assessment' button.

Try Self Assessment

Company name in English *	Company name in Arabic
Address in English (Location / City) *	Address in Arabic (Location / City)
Emirate *	License number *
Sector *	Sub-sector *



ITTI Incentives



The ICV bonus will reward digitally mature companies.

		Score ¹		ICV Bonus	Rationale
I4.0	Digital leader	>= 60%	►	5%	Digital leader; aligns to world-class practices and continuously leverages I4.0 concepts to boost competitiveness
I3.0	High maturity	40-59.99%	►	4%	Significant efforts invested to adopt technology; on their way to BIC status
	Medium maturity	30-39.99%	►	3%	Multiple initiatives in place but with variance in maturity; bonus offered to accelerate the digital journey
	Low maturity	20-29.99%	►	0%	Basic initiatives in place, no bonus offered
I2.0	Basic	0-19.99%	►	0%	Limited to no digital initiatives in place, no bonus offered

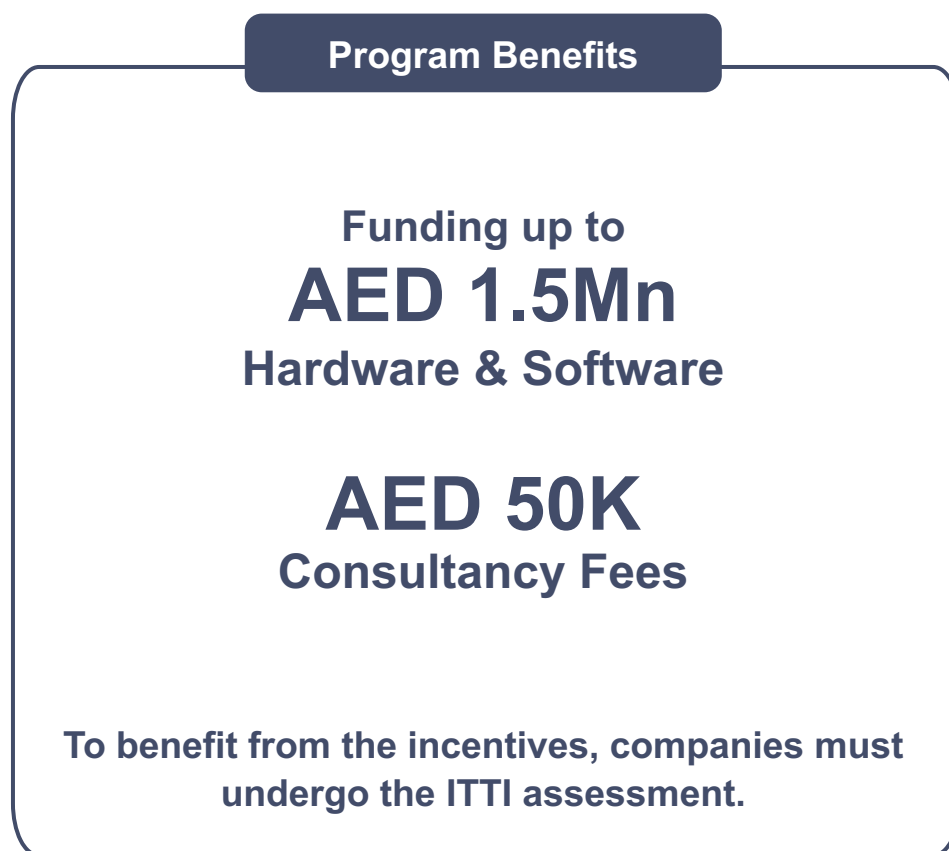
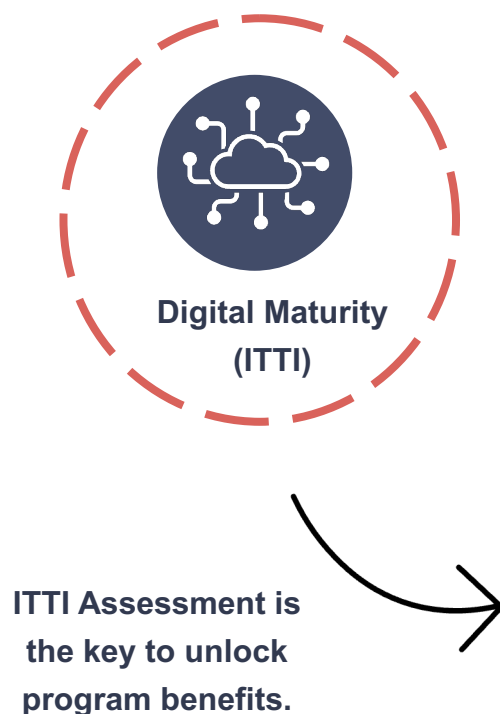
Percentage of total score across dimension divided by maximum possible score

The Golden Visa scheme will reward digital mature companies with accelerated nominations.

		Score		Golden Visa Nominations	Rationale
I4.0	Digital leader	>= 60%	▶	Up to 5	Digital leader; aligns to world-class practices and continuously leverages I4.0 concepts to boost competitiveness
I3.0	High maturity	40-59.99%	▶	Up to 2	Significant efforts invested to adopt technology; on their way to BIC status
	Medium maturity	30-39.99%	▶	N/A	Multiple initiatives in place but with variance in maturity; bonus offered to accelerate the digital journey
	Low maturity	20-29.99%	▶	N/A	Basic initiatives in place, no bonus offered
I2.0	Basic	0-19.99%	▶	N/A	Limited to no digital initiatives in place, no bonus offered

Index will support accelerated nominations from assessed organizations; application evaluation remains at discretion of relevant authorities

ITTI has been embedded as one of the main qualifiers to the ADDED Smart Manufacturing Incentive Program.



ITTI assessment feedback has been highly positive.

"Your knowledge and experience ... helped us to understand **where we are, where we should be and what it will take to reach to the goals.**"

"We really enjoyed going through this assessment and it is very clear **where we stand and what we need to do to improve.** This index can provide a good roadmap for us. SIRI's highest maturity levels were very unrealistic."

"This assessment gave us insight into some aspects that can be considered in our **future ERP enhancement projects.**"

"Thank you for the continues support, **ITTI make our plans clear and helped us to set our priorities.** "

"The assessment helps us understand **the status of the company,** its resources and activities and how to improve."

"The ITTI allows us to embark on **learning new skills and goal setting .**"

"This assessment is more **expansive in terms of the scope of coverage** as compared to SIRI."

"The assessment provided us with **valuable insight ...to greatly enhance our productivity...while leveraging digitization and industry 4.0 concepts.**"

"We appreciated the assessment for its **surprisingly simple and intuitive effectiveness.** "



Unlock Your Digital Potential.

ITTI Website



User Guide





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Thank you for listening.

Post Awareness Session Survey
Your feedback is valuable.

