Official SIRI Assessment Report

Catalysing the transformation of manufacturing

Company:	Amad Albenaa company for pallets and plastic products
Assessment Record:	OSAKSA1747164367239
Prepared By:	Shadi Bani Aldomi
Dated:	14 May 2025

SMART INDUSTRY READINESS INDEX

This is to certify that

Amad Albenaa company for pallets and plastic products

2nd industrial city, Eastern Region, Dammam, 34332, Saudi Arabia

Has been assessed to be SIRI certified

OSAKSA1747164367239

For the following scope of products Wooden pallets and boxes and other handling and packaging materials

Date of Assessment: 14 May 2025
Date of Award: 18 May 2025

Certificate No: SIRI-CEKSA1747164367239

SIRI Emblem Score: 1.69

To verify this certificate, please visit at: **verify.incit.org**

The validity of this Certificate is 2 years from the date of award.

This certificate remains the property of International Centre for Industrial Transformation and shall be returned immediately upon request.

Content Page

Overview of SIRI

The Smart Industry Readiness Index (SIRI) was created by the Singapore Economic Development Board (EDB) in partnership with a network of leading technology companies, consultancy firms, and industry and academic experts. SIRI comprises a suite of frameworks and tools to help manufacturers – regardless of size and industry – start, scale, and sustain their manufacturing transformation journeys. SIRI covers the three core elements of Industry 4.0: Process, Technology, and Organisation.

Familiarity with SIRI is critical for the interpretation of the results. However, we recognise that not everyone reading this Official SIRI Assessment Report will be familiar with the concepts and terminology relating to SIRI. Therefore, we have included an overview of the following SIRI frameworks and tools that will facilitate the reader in making sense of the results and insights provided within this Official SIRI Assessment Report.

1. **LEAD Framework**: A circular, continuous four-step process that all manufacturers can adopt in their approach towards Industry 4.0 transformation.

2. **SIRI Framework**: An overview of the key building blocks, pillars and dimensions for Industry 4.0 Transformation

3. **Assessment Matrix**: The world's first self-diagnostic Industry 4.0 tool to evaluate the current state of a manufacturing factory or plant

4. **TIER Framework**: A summary of four key principles for companies to consider as part of a holistic prioritisation exercise.

5. **Prioritisation Matrix:** A management planning tool to assist companies in quantitatively identifying the high-priority SIRI Dimensions where improvements will bring the most benefit.

The LEAD Framework

Transforming and upgrading a manufacturing facility is not a one-off exercise. Rather, it is a continuous and iterative process. This is encapsulated in the LEAD framework – a circular, continuous four-step process that all manufacturers can adopt in their approach towards Industry 4.0 transformation.

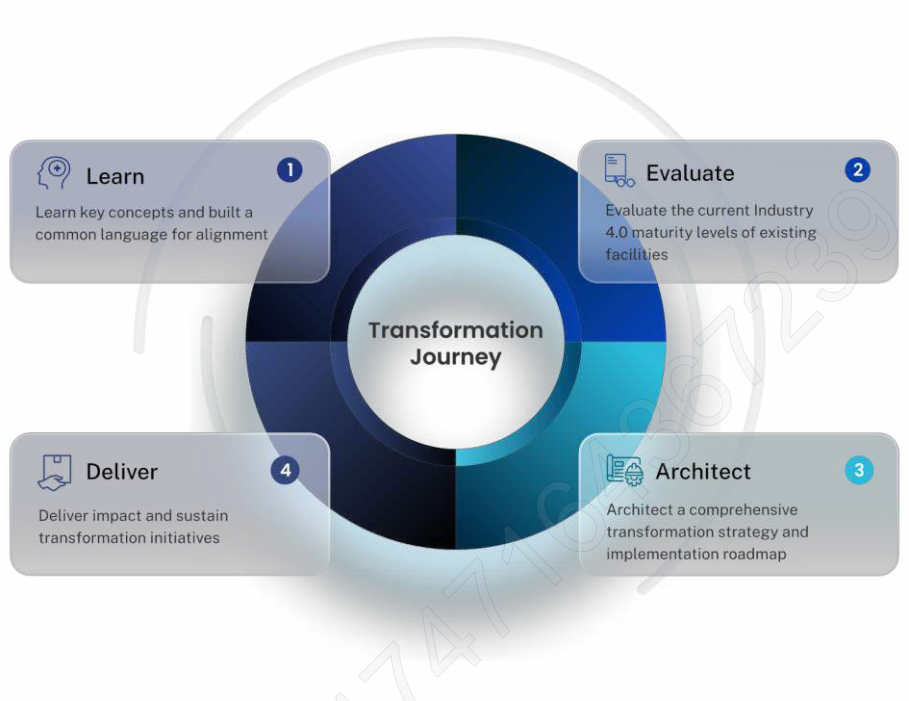

Figure 1 – The LEAD Framework

The SIRI Framework

The SIRI Framework comprises three layers. The topmost layer identifies three fundamental building blocks of Industry 4.0: Technology, Process, and Organisation. The second layer underpinning the building blocks comprises eight key pillars, which represent critical aspects that companies must focus on to become future-ready organisations. Finally, the third layer consists of 16 dimensions, which are areas of assessment that companies can use to evaluate the current Industry 4.0 readiness of their factories or plants.

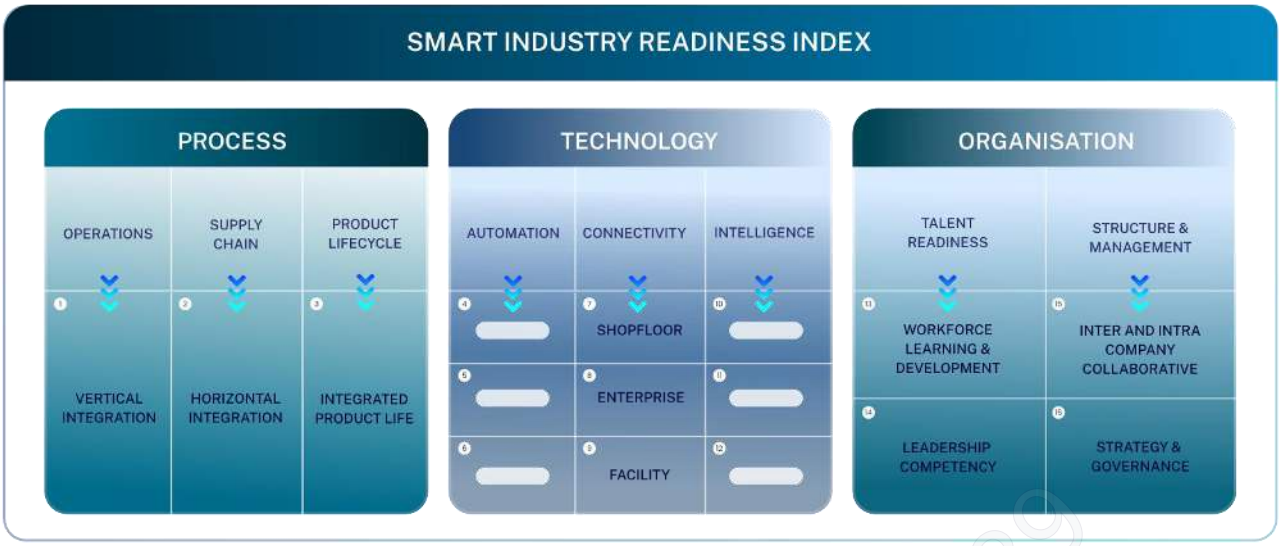

Figure 2 – The Smart Industry Readiness Index Framework

The TIER Framework

Prioritisation is the next crucial exercise in formulating effective Industry 4.0 roadmaps, as it helps companies identify business areas where improvements will generate the most value. The TIER Framework outlines four principles for companies to consider as part of a holistic prioritisation exercise. By evaluating these four principles, manufacturers can better focus their energies and resources on activities that bring the greatest benefits.

Figure 3 – The TIER Framework

The Assessment Matrix

The Assessment Matrix is the world's first self-diagnostic Industry 4.0 tool. Validated by a global advisory panel of industry experts, the Assessment Matrix is designed to strike a balance among technical rigour, usability, and relevance. Within the Assessment Matrix, there are six bands, in ascending order, tied to each of the 16 SIRI Dimensions. Each band describes a specific state within that dimension. Identifying a manufacturing facility's bands across all 16 dimensions therefore presents a snapshot of the manufacturing facility's current Industry 4.0 maturity level. This is referred to as the *Assessment Matrix Score*.

The Prioritisation Matrix

To help companies translate the four principles of prioritisation into action, the Prioritisation Matrix was developed to provide recommendations that are company-specific and directionally correct. Designed as a management-planning tool, the Prioritisation Matrix aims to assist companies in quantitatively identifying the high-priority SIRI Dimensions in which improvements will bring the most benefit. The Prioritisation Matrix formula comprises three key factors: cost, top key performance indicator (KPI) categories and a company's proximity to the industry best-in-class. Each factor is weighted based on its level of influence on the company's prioritisation exercise. The three factors are derived from four inputs, which in turn reflect principles of prioritisation in the TIER Framework.

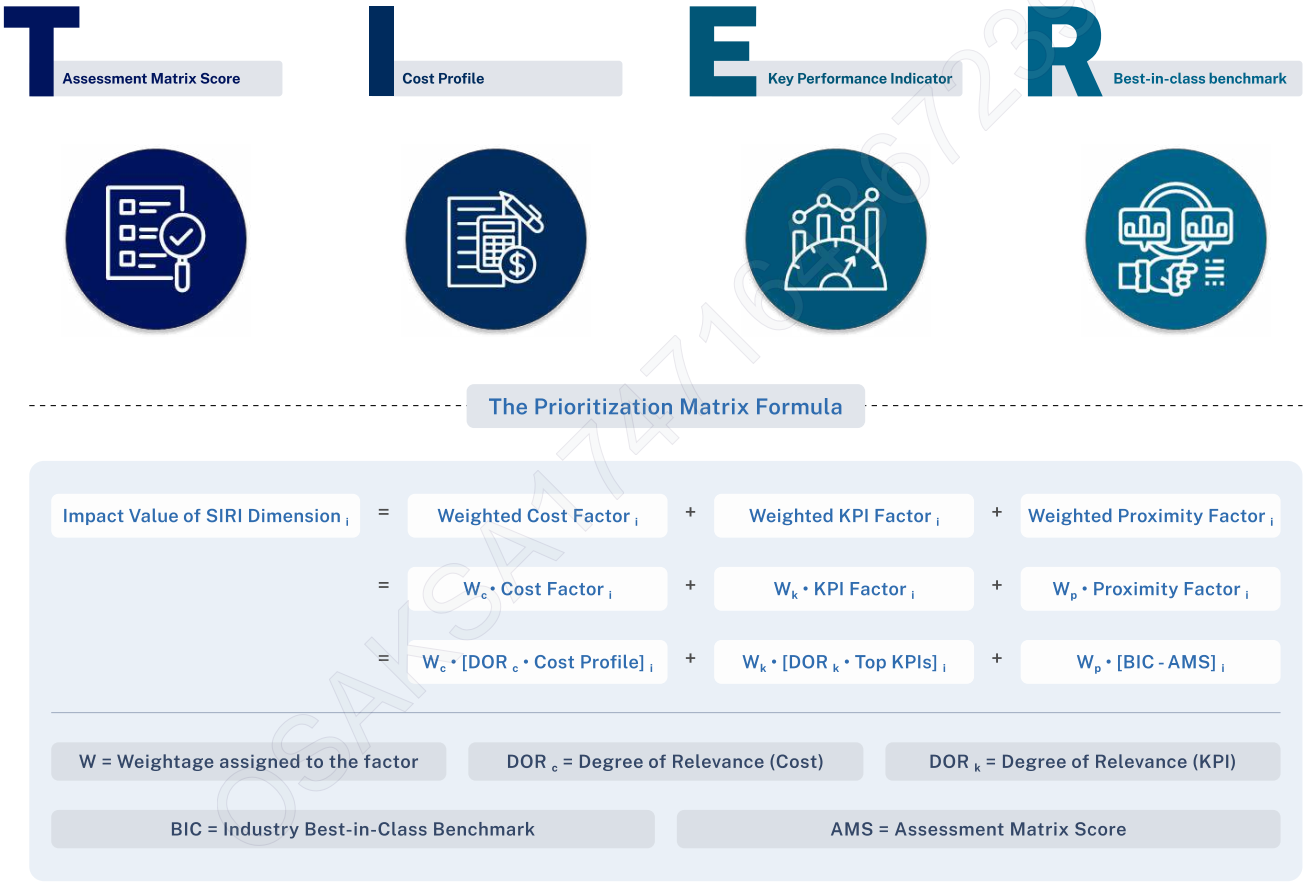

Figure 4 – The Prioritisation Matrix Formula

About the Official SIRI Assessment

The Official SIRI Assessment provides companies with a comprehensive evaluation of their factory or plant and identifies potential high-impact areas to focus on. The Results Section in this report details the findings from two key exercises conducted during the Evaluation Workshop at the company's premises:

i. An evaluation of the current Industry 4.0 maturity level of the manufacturing factory or plant, using the Assessment Matrix; and
ii. The identification of priority SIRI Dimensions for the company to focus on to bring about the biggest benefits, using the Prioritisation Matrix.

There are 5 Principles of Assessment underpinning the approach in which the SIRI Assessment is conducted:

1. The SIRI Assessment provides a snapshot of a facility's current state but not its future potential.
2. The SIRI Assessment uses Industry 4.0 concepts as reference points. Future manufacturing and industrial concepts, as well as technologies, should also be considered if relevant.
3. All dimensions should be considered, though the importance and relevance of each will vary, depending on the nature of the industry as well as the company's current and future needs.
4. Companies should not feel compelled to achieve Band 5 across all dimensions. Instead, they should strive towards higher bandings based on specific business needs and aspirations.
5. The SIRI Assessment is more than a one-off exercise – it should be used on an ongoing basis.

Figure 5 – Assessment Principles

A company may reference the various benchmarks provided in the “Insights” section of this report to obtain a sense of where the company stands vis-à-vis its industry peers and the rest of the manufacturing sector. It is also important to keep the 5 Principles of Assessment in mind as the company interprets the results provided in this report.

With this information, we hope that companies will be equipped with a repository of new insights to make informed and impactful decisions to take their manufacturing factories and plants forward into the Industry 4.0 age.

Scope of Assessment

This Official SIRI Assessment was conducted by Shadi Bani Aldomi (Assessor ID: SIRI130324SN002). The Assessment Record number, and the dates of the onboarding call, evaluation workshop, and debrief session are listed as follows.

Assessment Record: OSAKSA1747164367239	
Date of Onboarding Call	12 Apr 2025
Date of Evaluation Workshop	20 Apr 2025
Date of Debrief Session	14 May 2025

Table 1 – Dates of SIRI Assessment

This SIRI Assessment was conducted for:

Amad Albenaa company for pallets and plastic products	
Business Entity Registration Number	2050087103
Industry License Number	1435100183226
Address	2nd industrial city, Eastern Region, Dammam, 34332, Saudi Arabia
Annual Manufacturing Output	SAR 20000000
Employment Size	43

Table 2 – Company Details

Amad Albenaa company for pallets and plastic products manufactures the following products: Wooden pallets and boxes and other handling and packaging materials. The scope of assessment covers the entire factory/plant. Based on the nature of the operations, the Company is classified under the **General Manufacturing** Industry Cluster. The planning horizon for this assessment is **Strategic**.

The main point of contact from the company for this SIRI Assessment is Mr. NOORIDDIN ALSHAMALI, Factory Manager. The executives involved in providing inputs and comments during the Onboarding Call and the Evaluation Workshop are listed in **Annex A**.

Results

Assessment Matrix Score

Upon review, and in discussion with company representatives listed in **Annex A**, the Assessment Matrix Score for **Amad Albenaa company for pallets and plastic products** can be found in *Table 3 - Assessment Matrix Scores*. Full notes detailing the observations and explanations for each SIRI Dimension can be found in **Annex B**.

Assessment Matrix Results

DIMENSION			BAND		DEFINITION
OPERATIONS	1	Vertical Integration	**2**	**Digital**	Defined vertical processes are completed by humans with the support of digital tools.
SUPPLY CHAIN	2	Horizontal Integration	**2**	**Digital**	Defined supply chain processes are completed by humans with the support of digital tools.
PRODUCT LIFECYCLE	3	Integrated Product Lifecycle	**2**	**Digital**	Defined product lifecycle processes are completed by humans, with the support of digital tools.
AUTOMATION	4	Shop Floor Automation	**1**	**Basic**	Repetitive production processes are partially automated, with significant human intervention. Repetitive support processes are not automated.
	5	Enterprise Automation	**2**	**Advanced**	Enterprise processes are automated, with minimal human intervention.
	6	Facility Automation	**1**	**Basic**	Facility processes are partially automated, with significant human intervention.
CONNECTIVITY	7	Shop Floor Connectivity	**1**	**Connected**	Production assets and systems are connected via multiple communication technologies and protocols.
	8	Enterprise Connectivity	**3**	**Interoperable And Secure**	Interoperable Enterprise IT systems are secure.
	9	Facility Connectivity	**0**	**None**	Facility assets and systems are not connected.
INTELLIGENCE	10	Shop Floor Intelligence	**2**	**Visible**	Computerised OT and IT systems are able to identify deviations.
	11	Enterprise Intelligence	**3**	**Diagnostic**	Enterprise IT systems are able to identify deviations and diagnose potential cause.
	12	Facility Intelligence	**1**	**Computerised**	OT and IT systems execute pre-programmed tasks and processes.
TALENT READINESS	13	Workforce Learning & Development	**2**	**Continuous**	Structured L&D programmes are designed to run on an ongoing basis, to enable the ongoing enhancement and/or expansion of employees' skillsets.
	14	Leadership Competency	**2**	**Informed**	Management is well-informed, through formal channels and avenues, of the most recent trends and technologies.
STRUCTURE & MANAGEMENT	15	Inter- and Intra-Company Collaboration	**1**	**Communicating**	Formal channels are established for communication and information sharing across teams.
	16	Strategy & Governance	**1**	**Formalisation**	Transformation towards a Factory/Plant-of-the-Future has been formally identified as a business strategy at the corporate or business level.

Table 3 – Assessment Matrix Scores

Prioritised SIRI Dimensions

Based on the company inputs provided for the Prioritisation Matrix (refer to **Annex C**), the SIRI Dimensions with the highest Impact Values are listed in Table 3 below:

Planning Horizon	**STRATEGIC**					
Weightages	**Cost Factor**	30%	**KPI Factor**	40%	**Proximity Factor**	30%
Recommended Dimension for Prioritization						
Dimension	**Current Band**			**Next Band**		
Vertical Integration	Digital	2		Integrated	3	
Horizontal Integration	Digital	2		Integrated	3	
Shop Floor Intelligence	Visible	2		Diagnostic	3	
Inter- & Intra-Company Collaboration	Communicating	1		Cooperating	2	

Table 4 – Prioritised SIRI Dimensions resulting from the Prioritisation Matrix exercise

Cost Categories	Vertical Integration	Horizontal Integration	Shop Floor Intelligence	Inter- & Intra-Company Collaboration
Raw Materials & Consumables (74%)	High and Direct	High and Direct	High and Direct	Small and/or Indirect
Labour (14.000000000000002%)	High and Direct	Negligible	High and Direct	High and Direct
Selling, General & Administrative Expanse ("SG&A") (5%)	Small and/or Indirect	High and Direct	Negligible	High and Direct
KPI Categories	Vertical Integration	Horizontal Integration	Shop Floor Intelligence	Inter- & Intra-Company Collaboration
Asset & Equipment Efficiency	High and Direct	Small and/or Indirect	High and Direct	Small and/or Indirect
Workforce Efficiency	High and Direct	High and Direct	High and Direct	High and Direct
Utilities Efficiency	Small and/or Indirect	Negligible	Small and/or Indirect	Small and/or Indirect
Inventory Efficiency	High and Direct	High and Direct	High and Direct	Small and/or Indirect
Materials Efficiency	High and Direct	Negligible	High and Direct	Small and/or Indirect

Table 5 – Prioritised SIRI Dimensions resulting from the Prioritisation Matrix exercise

Insights

Manufacturing Sector Wide Comparison

The 3B Maturity Benchmark provides a manufacturing sector-wide reference point of what it means for a factory or plant to be Best-in-Class (BIC), in the Broad Middle, or lagging behind with the Bottom Performers. Based on the SIRI Assessment Results and the prevailing 3B Maturity Benchmark (2023/2024 Edition), **Amad Albenaa company for pallets and plastic products** has **1** number of dimensions falling within the Bottom Performers range, **14** falling within the Broad Middle range, and **1** falling within the BIC range.

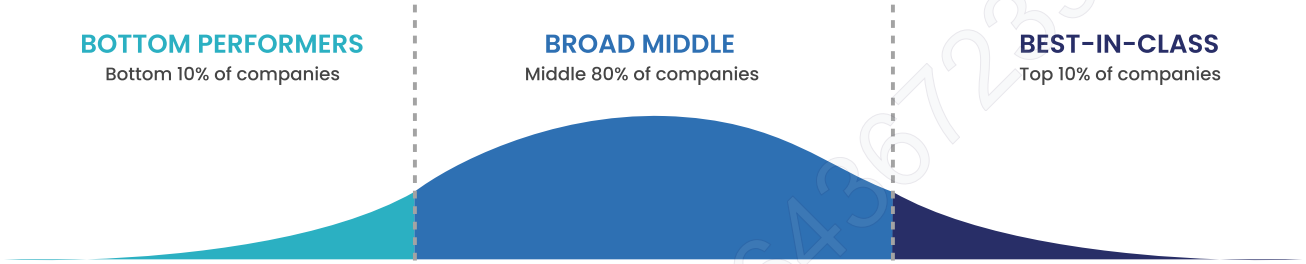

Figure 5 – Illustration of the 3B Maturity Benchmark

Manufacturing Sector Comparison

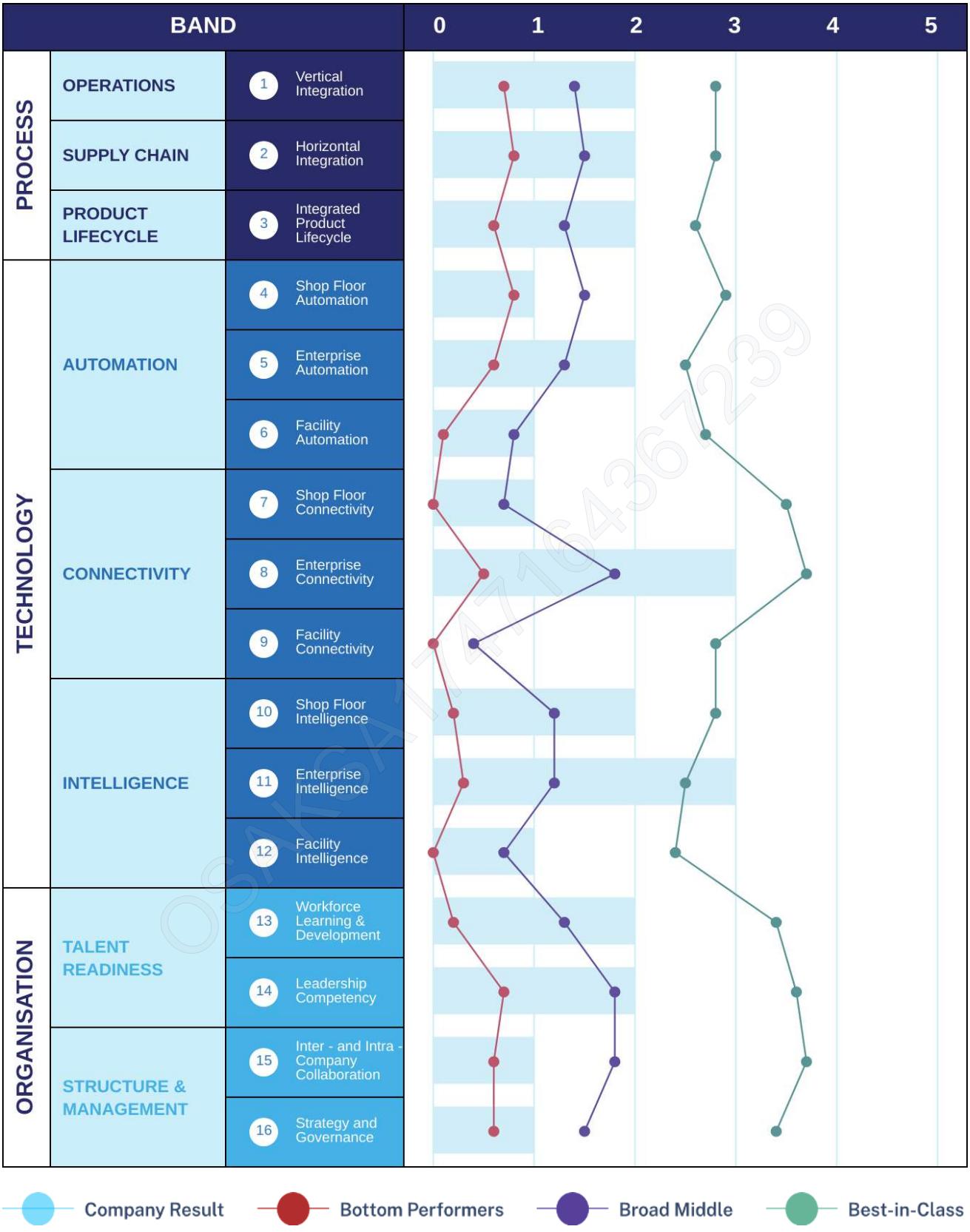

Table 6 – Comparison with 3B Benchmark

Industry Cluster Comparison

The state of transformation can be highly industry-specific, often heavily influenced by factors like the nature and volume of products, complexity of manufacturing processes, and competitive dynamics. Macroeconomic trends also influence business conditions and operating environments of various industries in different ways.

The Industry Performance Cards (IPC) are industry-specific benchmarks. They offer more apples-to-apples comparisons for companies to assess how they fare against their industry peers. Within each IPC is the average Assessment Matrix Score across all 16 SIRI Dimensions for companies in that industry. In comparison to the **General Manufacturing** IPC, **Amad Albenaa company for pallets and plastic products** has **12** dimensions performing *On Par and Above* the industry average, and **4** performing *Below* the industry average.

Industry Cluster Comparison

DIMENSION			BAND		COMPARISON
			COMPANY	INDUSTRY IPC	
PROCESS	OPERATIONS	1 Vertical Integration	2	1.37	
	SUPPLY CHAIN	2 Horizontal Integration	2	1.38	
	PRODUCT LIFECYCLE	3 Integrated Product Lifecycle	2	1.15	
TECHNOLOGY	AUTOMATION	4 Shop Floor Automation	1	1.25	
		5 Enterprise Automation	2	1.16	
		6 Facility Automation	1	0.65	
	CONNECTIVITY	7 Shop Floor Connectivity	1	0.48	
		8 Enterprise Connectivity	3	1.32	
		9 Facility Connectivity	0	0.35	
	INTELLIGENCE	10 Shop Floor Intelligence	2	0.95	
		11 Enterprise Intelligence	3	0.96	
		12 Facility Intelligence	1	0.49	
ORGANISATION	TALENT READINESS	13 Workforce Learning & Development	2	1.19	
		14 Leadership Competency	2	1.78	
	STRUCTURE & MANAGEMENT	15 Inter - and Intra - Company Collaboration	1	2.05	
		16 Strategy and Governance	1	1.36	

– On Par or Above – Below

Table 7 – Comparison with General Manufacturing IPC

Looking Ahead

With the completion of the Official SIRI Assessment, companies who are ready to take the next step in their transformation journey may consider one or more of the following courses of action:

INTERNAL	EXTERNAL
▪ Organise sessions to share the result of the SIRI Assessment Report with key stakeholders to stimulate discourse and raise awareness on the opportunities for Industry 4.0 transformation. ▪ Form in-house transformation teams to drive and lead the development and planning of Transformation Projects and/or Roadmaps.	▪ Organise sessions to share the result of the SIRI Assessment Report with relevant partners (e.g. customers, suppliers, and solution providers) to initiate dialogues and solicit feedback on opportunities for Industry 4.0 transformation. ▪ Engage a technology solution provider or consultancy to explore potential interventions for Industry 4.0 transformation.

ANNEX A:

Executives Involved

Assessment Record: OSAKSA1747164367239

Lead Executive	Title	First Name	Last Name	Designation	Email
✓	Mr.	NOORIDDIN	ALSHAMALI	Factory Manager	ns@sa.palletbiz.com

ANNEX B:

Assessor Notes on the 16 Dimensions of Assessment

1. Vertical Integration	Band: 2

SOPs are defined to manage and execute the resource planning and technical production processes via analogue tools

2. Horizontal Integration	Band: 2

IT systems are used to manage and execute enterprise processes
Purchase orders, delivery orders are managed and executed with suppliers via IT systems

3. Integrated Product Lifecycle	Band: 2

Digital tools are used to manage and execute processes along the product lifecycle
Customer feedback is collected and managed via digital tools

4. Shop Floor Automation	Band: 1

Repetitive production processes are partially automated with the assistance of equipment, machinery and computer based systems

5. Enterprise Automation	Band: 2

The enterprise processes are automated through workflow-based computer-based systems (ERP).
Data entry is managed by computer-based systems

6. Facility Automation	Band: 1

The facility processes are partially automated with the assistance of equipment, machinery and computer-based systems

7. Shop Floor Connectivity	Band: 1

Equipment, machinery and computer-based systems are connected to the local IT network via a communication protocol

8. Enterprise Connectivity	Band: 3

Computer-based systems interact and exchange information via a common encrypted network platform

9. Facility Connectivity	Band: 0

Facility assets and systems are not connected
Equipment, machinery and systems are not able to interact or exchange information.

10. Shop Floor Intelligence	Band: 2

Digital dashboards for production performance visualization and to notify operators of deviations from predefined parameters.

11. Enterprise Intelligence	Band: 3

Computer-based systems identify deviations and provides root cause analysis.
Implementation of financial reporting system modules to alert the relevant personnel in the event deviation from the required specifications and provide root cause analysis

12. Facility Intelligence	Band: 1

IT and OT systems are used for data processing
Equipment, machinery and computer-based systems relay messages based on PLC settings

13. Workforce learning & development	Band: 2

The company has a structured learning and development curriculum in place for the employees.
The company adopts continuous learning that upskills the workforce on the new Industry 4.0 skillsets.

14. Leadership Competency	Band: 2

The management team understands the concepts of Industry 4.0 and is informed of the technologies that can be implemented

15. Inter- & Intra-Company Collaboration	Band: 1

Periodic meetings are scheduled and conducted and discussions are articulated through emails or intra-net forums

16. Strategy & Governance	Band: 1

The company has an intention to implement certain Industry 4.0 technologies in their factory

ANNEX C:

Company Inputs for the Prioritization Matrix Exercise

Company : Amad Albenaa company for pallets and plastic products			
Cost Categories as a Percentage of Annual Revenue		**Top KPI Categories (Select 5)**	
Aftermarket Services/Warranty	0	Asset & Equipment Efficiency	
Depreciation	2	Inventory Efficiency	
Labour	14	Materials Efficiency	
Maintenance & Repair	1	Utilities Efficiency	
Raw Materials & Consumables	74	Workforce Efficiency	
Rental & Operating Lease	1	Planning & Scheduling Effectiveness	
Research & Development ("R&D")	0	Production Flexibility	
Selling, General & Administrative Expense ("SG&A")	5	Workforce Flexibility	
Utilities	1	Time to Market	
Transportation & Distribution	2	Time to Delivery	
Planning Horizons (Select 1)		Product Quality	
Strategic		Process Quality	
Tactical		Safety	
Operational		Security	

Industry Cluster for Best-in-Class Benchmark (Select 1)					
Transportation	Chemical	Electronics	Energy	Fast Moving Consumer Goods	General Manufacturing
Metal and Mining	Advanced Manufacturing	Pharmaceuticals & Healthcare	Paper	Utilities	Textile, Leather, Apparels

Assessor Comments

According to SIRI assessment **Vertical Integration, Horizontal Integration, Shop Floor Intelligence, and Inter- & Intra-Company Collaboration** dimensions are exposed as 4 prioritized dimensions for the company.

1. Vertical Integration

- **Current Score:** 2 → **Target Score:** 3
- **To improve the company's band from 2 to 3**:

Improvement Strategy:

- Establish a **real-time integration layer** between shop-floor machines (e.g., saws, nailing stations) and Microsoft ERP using OPC UA-enabled gateways or custom connectors.
- Deploy a **Manufacturing Execution System (MES)** to synchronize production planning, execution, and material usage.
- Enable **closed-loop data exchange**—orders from ERP initiate production, and completion data flows back for inventory and order status updates.
- Standardize data formats and establish **automated alerts** for discrepancies in schedule, machine downtimes, or quality issues.

Business Value:

- Enhanced **production agility** through faster rescheduling and responsiveness to order changes.
- Improved **inventory accuracy** and reduced WIP due to synchronized material tracking.
- Minimized **manual entry errors** and increased reliability of KPIs such as order lead time and yield rate.

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2. Horizontal Integration

- **Current Score:** 2 → **Target Score:** 3
- **To improve the company's band from 2 to 3**:

Improvement Strategy:

- Link ERP modules for **sales, purchasing, inventory, production, and logistics** using a shared master data schema.
- Build a **digital operations control center** with dashboards showing end-to-end status (e.g., raw material stock, orders in production, pending shipments).
- Introduce **workflow automation** for sales order processing, material requisition, and delivery scheduling.
- Enable **role-based access** to integrated reports and KPIs across departments.

Business Value:

- Faster **decision-making** through cross-departmental data visibility.
- Reduced **order-to-delivery time** by eliminating manual handovers and rework.
- Improved **customer service** through better order tracking and communication.

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3. Shop Floor Intelligence

- **Current Score:** 2 → **Target Score:** 3
- **To improve the company's band from 2 to 3**:

Improvement Strategy:

- Instrument machines with **vibration, energy, and temperature sensors** to monitor asset health.
- Implement **edge analytics** and connect outputs to dashboards on Power BI or SCADA interfaces.
- Use machine learning (ML) models to predict anomalies and failures based on historical trends.
- Train staff on **data-driven root cause analysis** and build protocols for handling alerts.

Business Value:

- Reduced **unplanned downtime** and lower maintenance costs through predictive strategies.
- Increased **OEE** (Overall Equipment Effectiveness) and throughput with more consistent equipment performance.
- Better **product quality** via early warning of process deviations.

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4. Inter- & Intra-Company Collaboration

- **Current Score:** 1 → **Target Score:** 2
- **To improve the company's band from 1 to 2**:

Improvement Strategy:

- Digitize partner communication using **EDI, supplier/customer portals**, or simple Excel integration with APIs.
- Define **standard data exchange formats** for forecasts, order confirmations, and ASN.
- Hold quarterly **collaboration meetings with key partners** to align expectations and readiness.
- Develop **joint KPI scorecards** for supplier performance and customer service levels.

Business Value:

- Smoother **procurement and delivery cycles**, reducing delays and excess inventory.
- Greater **supply chain transparency** and risk mitigation through shared planning.
- Higher **customer satisfaction** due to accurate, real-time information and dependable delivery.

SMART INDUSTRY READINESS INDEX

OFFICIAL ASSESSMENT REPORT