

Is Your Supply Chain Ready for AI? Aligning AI with Your Maturity Level

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Artificial Intelligence (AI) is revolutionising supply chain planning, but one size does not fit all. AI isn't just for highly advanced supply chains - every company can benefit, regardless of maturity. The key is to align the type of AI with your current capabilities and challenges, rather than jumping into advanced AI before laying the right foundation.

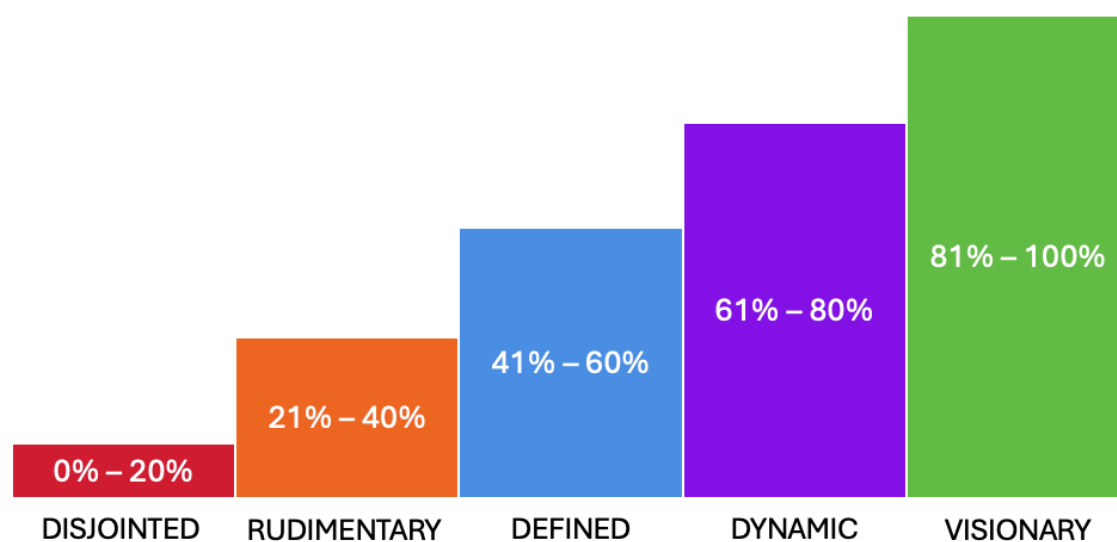
However, implementing AI blindly - without a clear understanding of your supply chain maturity level or the right technology partner - can be risky. AI success depends on selecting the right tools for your supply chain's needs and ensuring proper support for seamless integration.

Supply Chain Practitioners can uncovering their organisation's readiness through examining their Supply Chain Maturity across five levels: Disjointed, Rudimentary, Defined, Dynamic, and Visionary. Each level requires a different AI approach.

The Five Levels of Supply Chain Maturity and AI Readiness

A Supply Chain Maturity Model is a framework that can be used in determining where an organisation is today. There are various models each with 4 or 5 maturity stages published and adopted around the world by medium and large enterprise. Examples include those from Gartner, Oliver Wight, Deloitte, PwC and SCOR, each with their own idiosyncrasies and shortcomings for Australian & New Zealand supply chains.

The unique model designed by DMS for Australian & New Zealand manufacturers, distributors and retailers is based on 5 stages and is designed for assessing not only the people, process and technology aspects but also strategy and collaboration. This model can be used for identifying strengths, weaknesses and opportunities but also for recognising what AI can deliver for you now - while preparing you for future advancements. But how is the model used? Organisations can engage in a detailed Supply Chain Maturity Assessment or start simple with an online Supply Chain Maturity Score.



Here's how AI fits into each of the 5 stages of the DMS Supply Chain Maturity Score:

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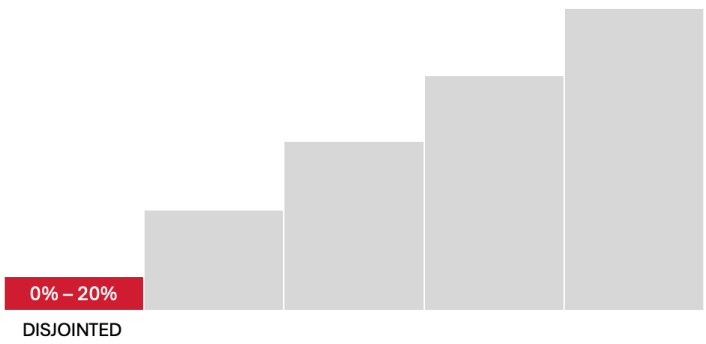
1- Disjointed Supply Chains (Low Maturity)

Limited processes, poor visibility, reactive decision-making

At this stage, supply chains operate in silos with minimal data integration, leading to inefficiencies and reactive decision-making. AI adoption should focus on **basic automation and data cleansing** to improve visibility and reduce manual effort.

- **AI focus:** Data standardisation, rule-based automation, and entry-level reporting tools
- **Example:** AI-powered data cleaning can improve forecasting inputs by **30%**, reducing errors in demand planning (Grant Thornton, 2023).
- **Risk if ignored:** Implementing complex AI models without a strong data foundation can lead to poor recommendations and inaccurate insights.

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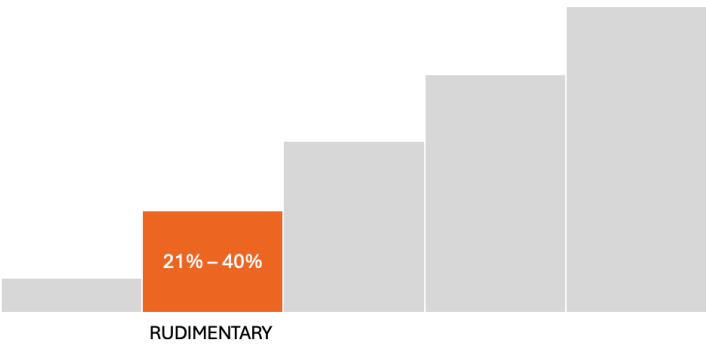
2- Rudimentary Supply Chains (Basic Maturity)

Some digital tools, manual forecasting, limited data-driven decision-making

Companies at this level often have ERP systems but **lack integrated planning tools** or rely on spreadsheets for decision-making. AI adoption should focus on **statistical models and well proven algorithms for demand forecasting and replenishment** to reduce reliance on intuition.

- **AI focus:** Predictive analytics, demand forecasting, and replenishment automation
- **Example:** Deloitte found that **mid-maturity supply chains using AI-powered demand planning improved forecast accuracy by 20%**. (Deloitte Global CPO Survey, 2023)
- **Risk if ignored:** Without AI-driven forecasting, companies may struggle with **stockouts and excess inventory**, leading to increased carrying costs.

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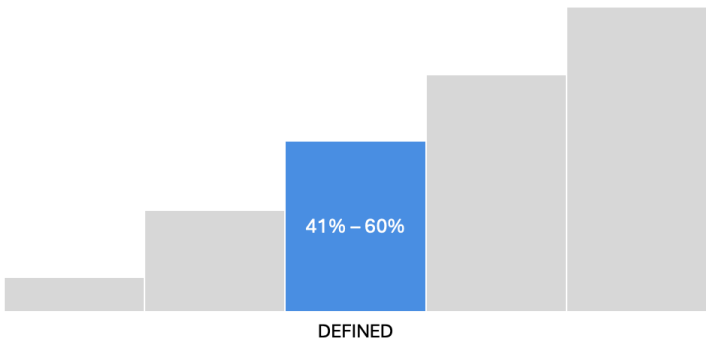
3- Defined Supply Chains (Intermediate Maturity)

Structured processes, better visibility, improving collaboration

Supply chains at this stage have well-established processes and some digital integration, but they lack agility and predictive capabilities. AI can be applied to optimise inventory, automate purchasing decisions, and improve supply chain visibility.

- **AI focus:** Machine learning for inventory optimisation, near-real-time demand sensing, automated exception management
- **Example:** KPMG reports that companies using AI for predictive inventory optimisation reduce excess stock by 15% and improve service levels by 20%. (KPMG, 2023)
- **Risk if ignored:** Without AI-powered automation, supply chains remain slow to react to disruptions, missing opportunities for efficiency gains.

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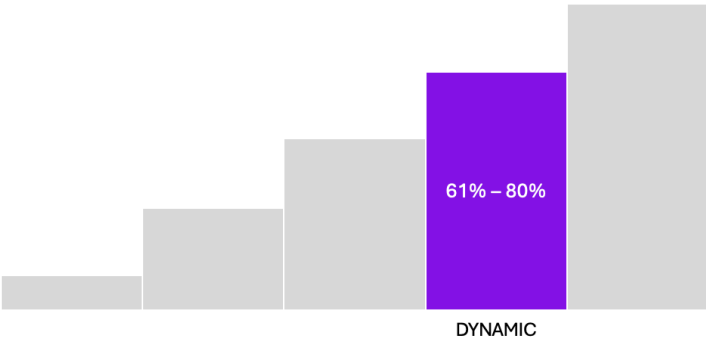


4- Dynamic Supply Chains (Advanced Maturity)

End-to-end digital integration, data-driven decision-making, agility in responding to changes

Companies in this stage use **real-time data to make intelligent decisions**, but many still rely on human intervention. AI should now be applied to **scenario modelling, automated decision-making, and prescriptive analytics**.

- **AI focus:** Digital twins, advanced prescriptive analytics, AI-driven scenario planning



- **Example:** Oliver Wight found that **AI-driven scenario planning reduces supply chain disruptions by 25% by proactively identifying risks.** (Oliver Wight, 2023)
- **Risk if ignored:** Without **advanced AI decision-support tools**, companies may **struggle to scale efficiently** and lose competitiveness in fast-changing markets.

“AI-driven scenario planning reduces supply chain disruptions by 25% by proactively identifying risks”

5- Visionary Supply Chains (Best-in-Class Maturity)

AI-driven, autonomous supply chain operations, proactive risk management

At this level, companies have **fully AI-automated** supply chains where decisions are **executed autonomously** based on live data, market conditions, and predictive analytics. AI is no longer just a tool - it's the **driving force of decision-making**.

- **AI focus:** Autonomous planning, continuous network optimisation, intelligent order response
- **Example:** According to DMS, **Visionary-level supply chains using AI-driven autonomous planning reduce operational costs by 30% while improving fulfilment speed.**
- **Risk if ignored:** Companies that fail to reach this level risk **falling behind AI-native competitors** who use AI for complete decision automation.

“Visionary-level supply chains using AI-driven autonomous planning reduce operational costs by 30% while improving fulfilment speed”



Avoiding the Pitfalls of Poorly Aligned AI Adoption

AI has the potential to deliver value at every level, but **jumping into AI without a clear plan can backfire**. Common pitfalls include:

- **Investing in AI that doesn't match your maturity level:** Deploying an AI-powered digital twin when your core data is still fragmented won't deliver value.
- **Lack of integration with existing systems:** AI should enhance your **ERP, WMS, and TMS** systems - not operate in isolation.
- **Resistance to AI adoption:** AI success requires **executive buy-in and workforce upskilling**. Oliver Wight reports that **organisations that fail to train teams on AI adoption are 2.5x more likely to struggle with implementation.** (Oliver Wight, 2023)

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This is why **choosing the right technology partner is as critical as selecting the right AI**. The best partners **tailor AI adoption** to your supply chain's current state while building a roadmap for future advancements.

Finding the Right AI Strategy for Your Supply Chain

AI is for everyone - but not all AI is for everyone. Success comes from **matching AI solutions with your current capabilities** while preparing for the next level of maturity. Instead of asking, **“Is my supply chain ready for AI?”** - the better question is: **“What kind of AI is right for my supply chain?”**

With the right AI solution - aligned to your maturity level and supported by the right partner - your supply chain can **increase efficiency, reduce risk, and build long-term resilience.**

Final Thoughts

AI is no longer a futuristic vision - it's here, and it's accessible **to all supply chains, at every maturity level**. By assessing where you are today and **implementing the right AI for your maturity level**, you can **unlock its full potential** and move toward the next stage without the risks of misalignment or wasted investment.

So, where does your supply chain sit on the **DMS Supply Chain Maturity Score**? The answer could shape your AI journey for the future.

Visit www.supplychainmaturityscore.com to find out.

About the Author

Elton Brown is a Senior Business Consultant at Demand Management Systems (DMS). He helps businesses across Australia and New Zealand transform their supply chains with data- driven planning and decision-support tools. He is a frequent speaker and contributor on the future of supply chain planning, AI, and digital transformation.

About the DMS

For more than 38 years, DMS has been leading the charge in transforming supply chains across the Asia-Pacific region. Renowned as a global frontrunner in Supply Chain Transformation, DMS brings unparalleled expertise in advanced supply chain technology and consulting services, empowering businesses to streamline operations and achieve sustainable success.

Whether your supply chain is in its emerging stages with limited maturity or a well- established system with mature data and processes, DMS delivers adaptable solutions that align with your unique business goals and supply chain objectives.

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