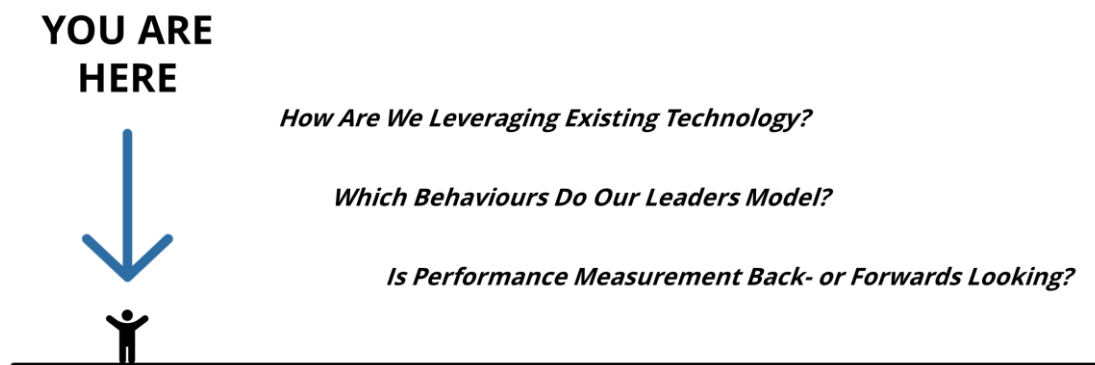


Harnessing Supply Chain Digitisation, Analytics and Talent...

...to deliver a competitive advantage across your operating ecosystem.

The Sequoia team recently attended the annual Gartner Supply Chain Conference in London. We heard the latest thinking from some of the industry's leaders on how they're approaching Supply Chain 4.0 and the **technology, talent and temperament** required to survive and thrive. There is so much hype around digitisation now that without a compass to guide your journey it's easy to suffer from **choice overload**¹ or make the wrong investment decision. Before we dive into our interpretation of how best to approach this sometimes exciting, sometimes terrifying topic, let's review how best to orientate yourself to choose your digitisation pathway.

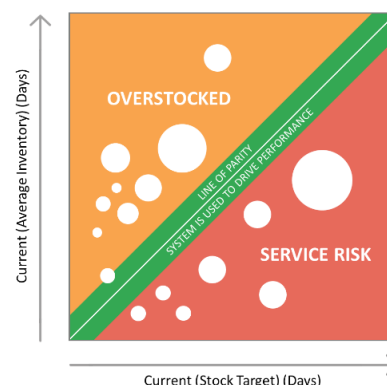


How Are We Leveraging Our Existing Technology? What's Our Maturity Level?

You may not think about it on a day-to-day basis but some of the core systems which drive your business – whether SAP, JDA or others – run on some of the most sophisticated algorithms to produce regular planning cycle outputs. Yet many of the companies we speak to don't feel able to exploit their planning systems sufficiently to create a competitive advantage² and are looking for other digital solutions.

However, let's flip that around: if you are not using your foundational technology to drive business performance, will loading additional, more complex technology on top solve the problem? At The Sequoia Partnership we recommend that clients investigate their level of *system adherence* to understand root cause and remediation actions before diving into investment decisions. Building

technology investments on a shaky foundation is unlikely to yield increased responsiveness or reduced inventory. Our diagnostics process has helped many organisations to pinpoint gaps in their existing technology execution.



¹ The Paradox of Choice – Why More Is Less is a 2004 book by American psychologist Barry Schwartz. s

² Gartner estimates that up to 75% of ERP implementations fail to deliver on expected outcomes whether cost, timelines or benefits delivery

Do We Measure Performance... Backwards or Forwards? What Behaviour Does That Drive?

Another useful way to think about how technology and digitisation can be used to transform business performance is to consider how your organisation currently uses data to analyse performance and make trade-off decisions. Many companies still rely on backward looking or *lagging* metrics as their main performance driver: Did we hit our OTIF target? How much did we spend? What were obsolescence, freight and manufacturing costs? This data can be useful in pointing to a hotspot that requires further investigation, but it provides little insight to spot risks, act and proactively balance trade-offs.

Are you a lagging organisation...

...or a leading organisation?



LAGGING METRICS	LEADING METRICS
Customer Service Back-Orders LOTIF	RM Availability # RM Pos outside warehouse not offloaded RM for production not on site % RM Pos past due 3 days % RM Pos with pull-in SAP msg % RM with SS inventory less than 99.5% service RM cycle count accuracy RM in quality over [SAP] days
Demand Planning Forecast Error Forecast Value Add Forecast Bias	FG Availability % Process orders over 24 hours FG in quality over [SAP] days % Plan orders not converted incl root cause Schedule adherence incl. root cause % GF with SS inventory less than 99.5% service FG cycle count accuracy % 13-week capacity outlook cannot be met
Costs Inventory \$/days Freight – sea and air Manufacturing O'heads Obsolescence	Logistics Availability % containers booked for [X] days dispatch % container arriving late

Are Your Leadership Team Modelling the Right Behaviours?

As a senior executive in your organisation, the way you approach accessing and reviewing performance data will set the tone for the rest of your community. If you prefer to work digitally – to go to the source of data, linked directly to your transactional system – then your people will know that you expect up-to-the-minute information, always available online. To achieve this, they must operate in systems without offline intervention to ensure that the picture is always current.

However, if you expect your teams to create a bespoke monthly pack in PowerPoint with changing requirements the team will come to believe that you only assess performance monthly and therefore if they've got the 'story' ready for month-end reporting there's no need to be responsive and of the moment.

Creating a discipline about how you interact with operations, how independent you are in the way you access data and the expectations you have of your teams will determine the way they want to see themselves.

Take Our Quiz to Find Out What Type of Digital Leader You Are

- 1. You wake up to hear your partner laugh 'Those Kardashians seem to be back in love with Snapchat - they're going crazy for your new product on there'. Do you...**
 - a) Smile smugly to yourself. That dynamic forecast tool you had installed will already be scraping the web to calculate an expected demand increase from the Kardashian chatter. By the time you reach the office your advanced planning tool will have rescheduled this week's production in response.
 - b) Groan in pain. Who knows what, if anything, this means for the week's S&OP discussions but for sure the marketing and sales team will be going crazy with excitement and demand you quadruple production. A week of chaos and late nights awaits you.
 - c) Lay on the kitchen floor while your 12-year-old explains the meaning of your partner's statement and its potential impact for you, then shut your eyes and wistfully remember back to the good old days. How full is that retirement pot?
- 2. You turn on BBC to hear that a freak storm is due to hit your city in the next 12 hours. As you begin gathering up garden furniture you remember the critical delivery of raw materials due to arrive this week for an urgent customer contract. Do you...**
 - a) Give yourself a pat on the back. That new shipment tracking software is awesomely efficient. One look at the app reveals that the shipment cleared customs yesterday and a nice man called Jim is due to deliver it at 10am this morning. Take that storm.
 - b) Call your RM planning manager, customs manager and logistics manager to see if they can figure out what's going on. Who knows whether they can impact the situation within 12 hours.
 - c) Panic. The only person who knows anything about the account is on holidays. He normally does all his planning on spreadsheets so chances of finding the relevant record in time are virtually hopeless.
- 3. Your HR business partner approaches your desk in a panic: he needs a quick summary of your millennial talent retention strategy for an update with the CEO in half an hour after a spate of resignations. Do you...**
 - a) Think 'finally!' All the effort of implementing tools with intuitive UI, creating an entrepreneurial environment and measuring team engagement will pay off.
 - b) Make excuses? Well there's the supply chain academy that the team put together, but you haven't had the strategic support you need to make time for training.
 - c) Storm out for a coffee. If another person mentions those prized prima donnas you'll scream. No-one pandered to you when you entered the workforce. Why can't they just sit at their desks and get on with what they're told to do?

Mostly A... Sprinter!



You've got all the latest technology and you continue fighting to maintain competitive advantage through leveraging industry 4.0 technology.

Mostly B... Long Distance Runner



You've got many of the supply chain fundamentals in place - a solid ERP system and some reasonable data but you'll still struggling to realise the full potential.

Mostly C... Light Jogger, possibly couch to 5km




You need to start with a vision for where you want to be. Don't let your current situation get you bogged down!

The Future Is Bright, The Future Is Digital.

Now, imagine a scenario where the health of your Supply Chain can be visualised daily – across all sites and all regions - and where all the risks of service ‘waste’ are clearly identified and tracked by your digital platforms. Your role is simply to articulate trade-off decisions well in advance to enable responsive decision making in an agile environment. Over time even these trade-off decisions will become part of the prescriptive analysis that runs your business. For now, let’s focus on predictive. No firefighting. No surprises.

The future is out there.

Supply Chain Health Dashboard



Raw Mats Supply	Production Capacity	Fin. Goods Supply	Warehouse & Logistics	Forecasting & Demand	Customer Satisfaction
PO	Plan v commit	Open orders	Order pick time	COV/FVA	Predicted Avail. By A/C
QI	Sch. Adh.	QI	Container pre-booked	Bias	Qualitative factors
Cycle count	Downtime	Cycle count	Utilisation	Volume	Stock service
Stock service	3 rd party capacity/util.	Stock service	On-time departure	Promotional	COV/FVA
Vendor	13-week/ann. capacity	Obsolescence	13-week/ann. capacity	Enriched	Returns

Blockchain technology can enable data sharing across 3rd party organisations. It is an enabler to improved digital performance as opposed to the solution.

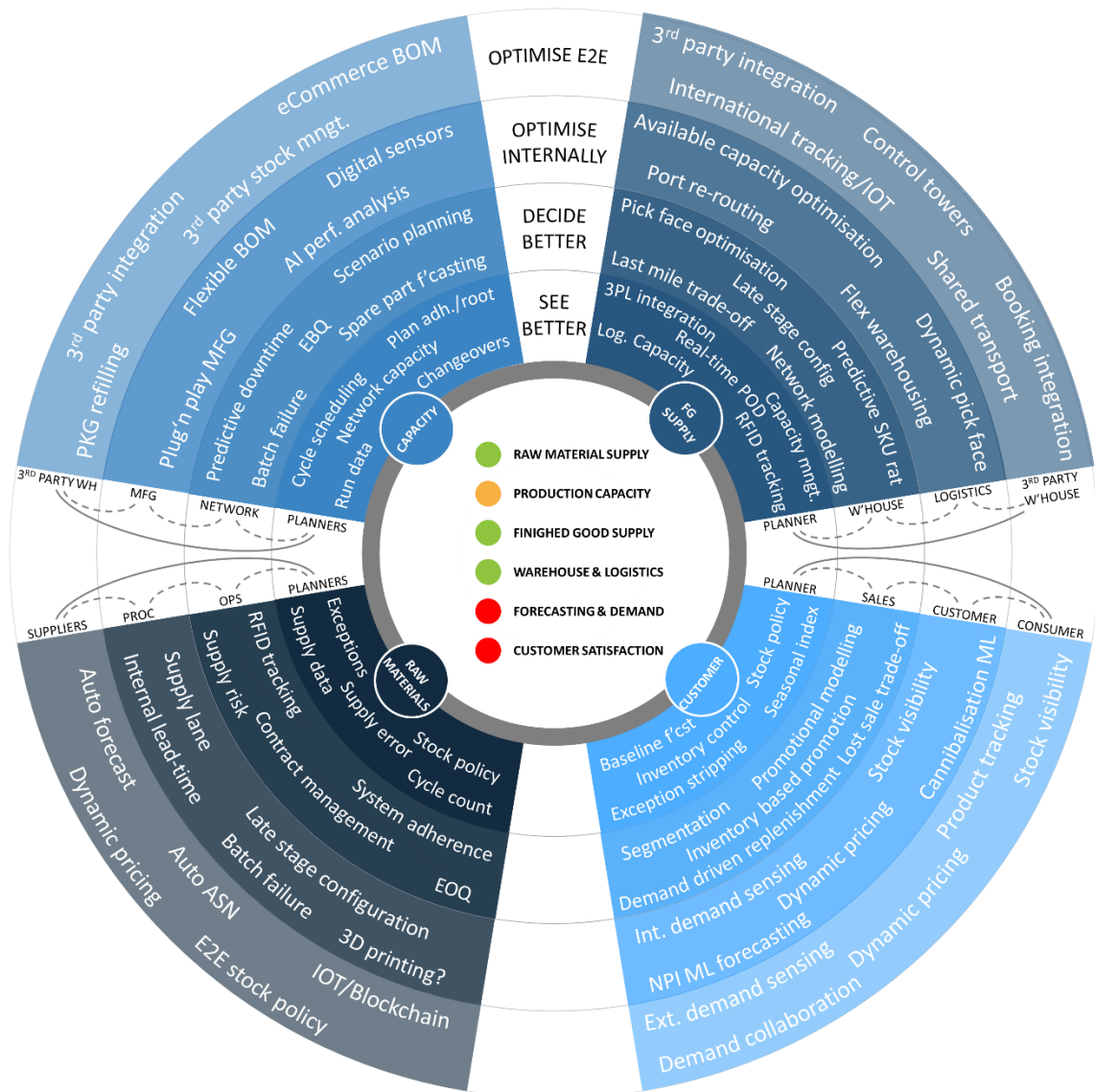
How will we get to that Nirvana of always-on data analytics and up-to-the-minute risk assessments? It starts with your foundational transaction data and builds out through a programme of digital enhancements to transform the way you optimise your customer experience and the cost to deliver it.

Below is our proposed approach to enhancing digital capability within your organisation and across your stakeholder groups, from suppliers to customers and consumers. It’s important to start with the innermost part of the capability build: See Better. These are the fundamental building blocks required to really kickstart your digital journey. These are the pieces of data you need to deliver that instant Supply Chain Health Dashboard.

Build Out Your Digital Capability – The Supply Chain Digitisation Onion

Before you're ready to engage with suppliers and customers it's important to be able to 'See Better' and 'Decide Better' within your own organisation, peeling away the onion layers of data ambiguity that have existed. This will lead to meaningful conversations and negotiations. Ensuring you have the right data and digital processes in place will fast track you towards those vital stakeholder engagements.

Supply Chain Health Dashboard



As you go around the wheel we also predict that you'll find there are technology solutions already in place within your organisation which are not being fully utilised to deliver benefits due to poor configuration, lack of change management or any other of the myriad reasons that technology implementations fail to deliver results. Don't forget the stat: up to 75% of ERP implementations fail to deliver on expected outcomes.

Where is the best place to begin with such a complex landscape and such a range of solutions to choose from? At Sequoia we recommend starting with a simple diagnostic of where you are now. By grounding

ourselves in reality, we can identify the interventions likely to yield most impact to increase responsiveness and improve efficiency.

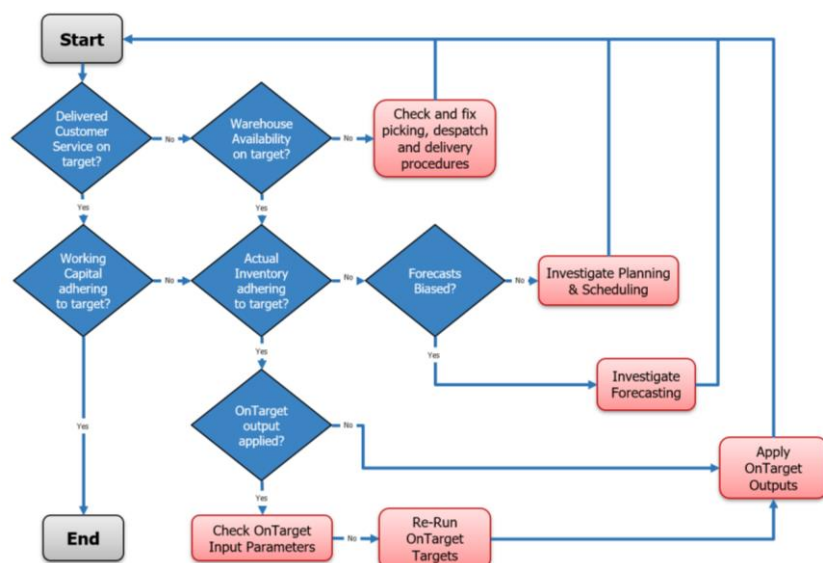
The Sequoia Partnership recently worked with a major global FMCG organisation to do just that. We supported them with an internal digital capacity assessment to create their 2020 investment roadmap. Their focus was on making sure that they were *'raising the floor, not just the ceiling'*.

This is a partner we have been working with for many years who has come to understand that tangible results from digital investment can only be embedded by building on a solid foundation. Together we identified critical focus areas to assess across their regional footprint, examples of best practice and markets requiring immediate intervention to keep them on set them on track with the digital capability building programme.

Example: Targeted Digital Supply Chain Diagnostic

Critical Focus Area	Data Visibility & Trade-Off Capability	W. Europe	N. Europe	S. Europe
Forecast Performance	Demand COV, Forecast COV, Bias based on the appropriate lag	5	3	3
Service Performance	OTIF by SKU location, Availability by SKU location	5	4	4
Inventory Control	System Adherence by SKU location, Inventory forecast accuracy	4	2	2
Established ERP	Plan adherence, Planner amendment reporting	4	3	1
Established Statistical Stock calculation	Presence of system, Adherence to recommendation,	4	2	2
Production Agility/Capacity	Cycle stock days cover, Plan change due to capacity	2	3	4

By identifying the areas of underperformance, we were able to take the client through a root cause analysis to identify where data and digital processes could be enhanced to improve end-to-end responsiveness and efficiency.



Supply Chain Digitisation: Client Case Studies

Below we share some client case studies where targeted digital intervention based on a holistic review has led to significant business performance improvements. If you would like to discuss any area of Supply Chain Digitisation listed above we have case studies to share and discuss with you.

Case Study: Determine Economic Order Quantities (EOQ) across the Supply Chain		FMCG Beverage Manufacturer	RM SUPPLY
Challenge	Our client had been working on their inventory optimisation strategy across the Supply Planning organisation for several years. As their optimisation journey continued they began to find themselves in regular conflict with colleagues in other functions due to conflicting KPIs across purchase price, inventory levels, transport utilisation and inbound material receipts.		
Diagnostic Approach	<ul style="list-style-type: none"> i. Gather the cost data necessary to calculate raw material economic order quantities incl. tiered purchase price, sea and air freight costs, working capital and warehousing costs, operational receiving costs across warehouse, handling and quality ii. Analyse the transactional data required to determine the unique profile of each SKU incl. forecast and actual consumption, shelf life, supplier lead-times and MOQ iii. Understand the current KPI profile across each functional area 		
Technology Solution	Use statistical solver to determine the least cost end-to-end quantity to drive replenishment decisions incl. +/-5% tolerance to reach appropriate tiered price. Create API connection with transactional ERP system to transfer approved results to appropriate lot size parameter.	Behavioural Solution	A new set of cross-functional KPIs was introduced to ensure that decisions taken on purchase price and MOQ for new material introductions were balanced across the end-to-end stakeholder groups by calculating it using the EOQ tool.
Change Management:	<ul style="list-style-type: none"> i. Optimisation council established incl. procurement, planning, manufacturing and quality to meet monthly to review and sign-off new material addition decisions ii. EOQ tool used to provide real-time analysis to stakeholders and allow what-if analysis to be completed during the meeting to conclude decision making in a timely way 		
Results	Robust, integrated Economic Order Quantity calculation embedded in standard operating practices to dynamically update based on live transactional data. Contributed towards total inventory reduction of \$50million over 3 years without service or cost impact.		

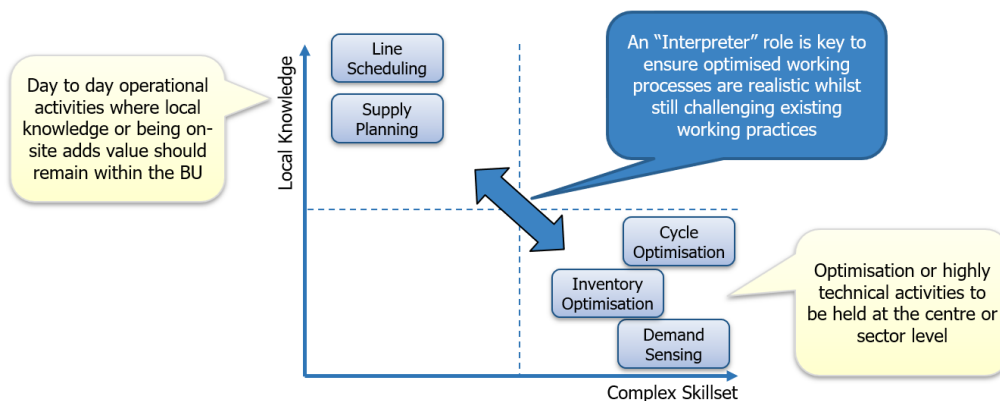
Case Study: Establish Cycle Based Scheduling to Maximise Available Capacity		Medical Device Manufacturer	CAPACITY
Challenge	Our client was suffering the effects of limited available capacity and rapidly changing demand signals. Coupled with an inconsistent stock policy, this was leading to frequent breaks in their production schedules and regular out-of-stocks and lost sales.		
Diagnostic Approach	<ul style="list-style-type: none"> i. Gather the production data necessary to model optimal production cycles and associated inventory levels to meet demand variability incl. run times, changeovers, downtime and product groupings ii. Analyse the transactional data required to determine the unique profile of each SKU incl. forecast and actual sales, shelf life and manufacturing costs iii. Understand production dependencies, available capacity, planned and unplanned downtime and operational overtime flexibility switches 		
Technology Solution	Use genetic algorithm to create product 'nests' and identify optimal make frequency per month based on characteristics of SKU. Use Sequoia's proprietary safety stock algorithm in parallel to define appropriate inventory levels to ensure target availability based on demand variability. Update scheduling software to plan against cycle frequencies and review quarterly.	Behavioural Solution	Scheduling based on operational history and experience must be replaced by automated scheduling from the system. Introduce KPI to progress from 75-100% automated scheduling within 6 months to drive behaviour towards data management and improvement in the areas of run times, downtime, changeovers and planned maintenance.
Change Management:	<ul style="list-style-type: none"> i. The importance of production data to the digital agenda shared with operations and supply chain schedulers via training session and allocated monthly master data management ii. Job descriptions updated to move role focus from scheduling and fire fighting to master data management and scheduling system adherence 		
Results	Additional day of capacity created each month plus 15% headroom based on adherence to fixed cycles. Customer service returned to consistent 98% target.		

Organising for Success

Moving to a digitised Supply Chain organisation will require the re-assessment of roles and responsibilities within the Supply Chain organisation to create a bi-model operating environment³. In this new organisation roles will be defined according to each individual's contribution in either defining or executing strategy. The organisation design of the future will involve less hierarchy and management structures but will instead oscillate between those with advanced technical knowledge and understanding in a centralised environment and those with strong local and operational knowledge who can build out the data models and information required to feed new analytics and digitisation.

Based on our experience with multiple clients, the gap between those in operational roles and those who sit in centres of excellence can be vast. Practically, it is often difficult to empathise with those at the other end of the performance spectrum. While many organisations seek to develop 'all-rounders' – often with limited success – Sequoia suggests taking an 'interpretive' approach. Each organisation should be lucky enough to have a small number of individuals with the inherent capability to move between those in front line roles and those who focus on the technology of tomorrow. These are the interpreters who can bring diverse groups together to identify business requirements and navigate the organisation through new technology solutions. By cultivating the skills of these unique individuals, organisations can make change happen more quickly and successfully than by trying to substantially transform the behaviours of an entire organisation over a short period of time.

Example 'Interpretive' Org Design



Our team can support your team through your Supply Chain Digitisation journey. Let's get started!



Sam Newell
Managing Consultant
Digital Capability & Benefits Realisation



Sarah Sheppard
Managing Director
Digital Change Management



Steve Wall
Chairman
Digital Manufacturing & Logistics Futures



Erika Biggadike
Principal Consultant
Digital Process Excellence & AI



Ciara O'Brien
Managing Consultant
Digital Planning & Performance Analytics

³ Gartner recommends that organisations follow two distinct supply chain paths: Mode 1 is 'analogue' and designed for stability, efficiency, and operational excellence. Mode 2 is digital and designed for agility and innovation—an approach supported by advanced analytics, automation, and connectivity. Both modes must work successfully together to identify, adapt and integrate new process technology.