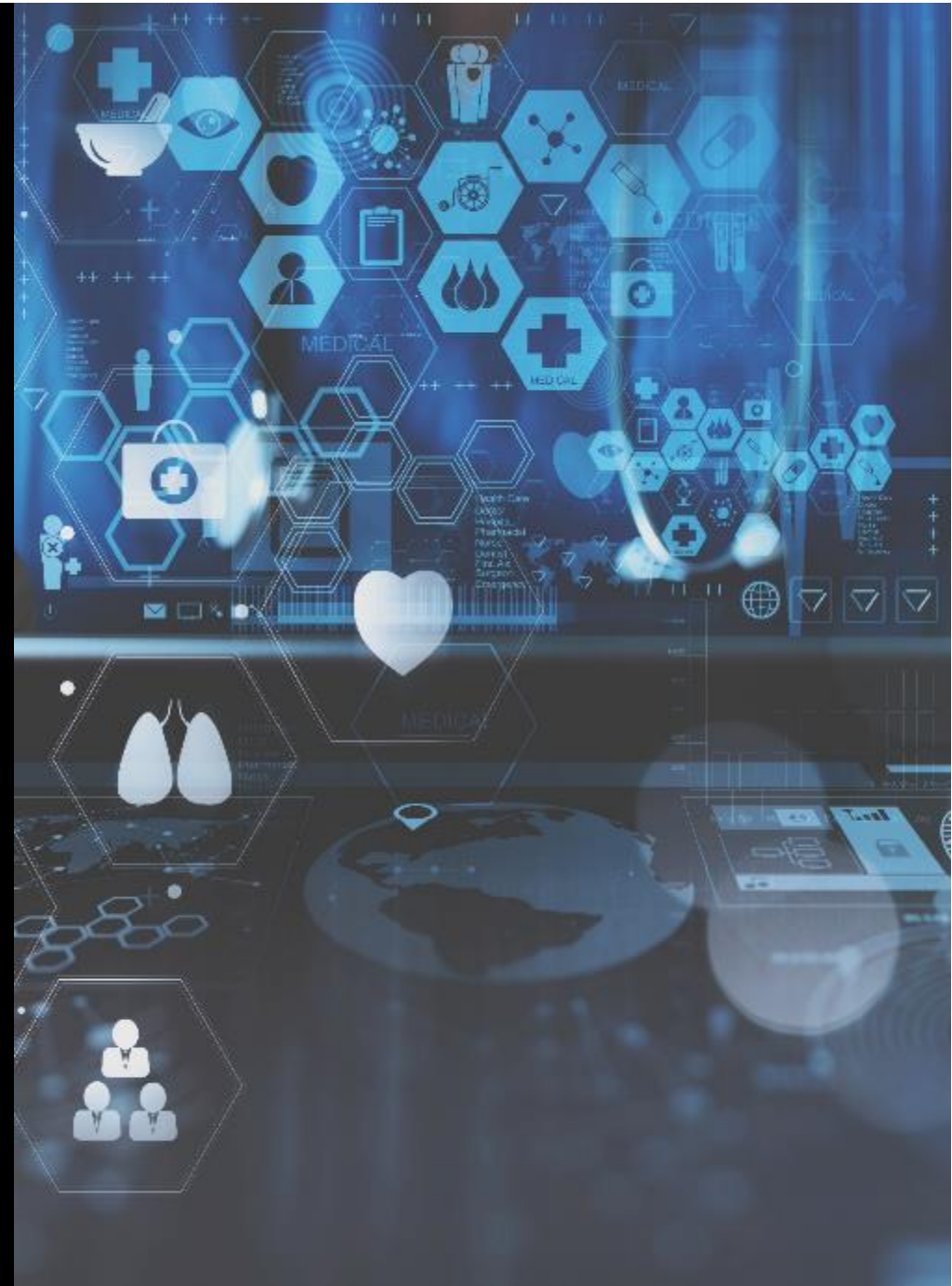

Re-defining sourcing

Economic uncertainty as the trigger for operational efficiency and reinvention

May 21, 2020



Continuing professional education credit

This webinar qualifies for one hour of Continuing Professional Education (CPE).

To qualify for the CPE credit, you must be in attendance for the entire webinar, participate in polls and complete the evaluation form at the end of the webinar.

Qualified attendees will receive CPE certificate in four to six weeks.

Questions regarding the CPE for this webinar can be sent to hannah.brylow@bakertilly.com.

Baker Tilly Virchow Krause, LLP is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: learningmarket.org.

RE-DEFINING SOURCING

Today's presenters



Jeff Jorge
Principal, Supply Chain Practice Leader
jeff.jorge@bakertilly.com
+1 (248) 368-8798



Cameron Reid
Sr. Manager, Sourcing Practice Leader
cameron.reid@bakertilly.com
+1 (262) 385-4994



AGENDA

- Impact to sector
- Guiding posts that redefine sourcing
- Sourcing phases and post-pandemic approach: Maturity model meets best-in-class planning methodology
- Taking action: Now > Next > Later
- Five actions to guide your next steps



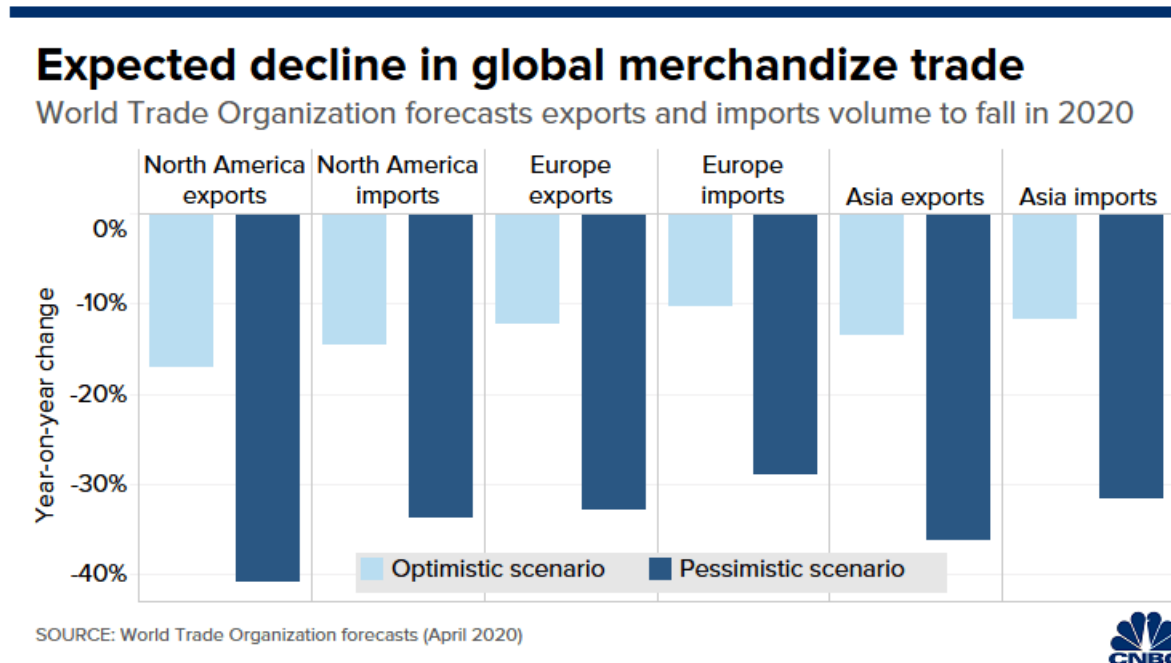
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RE-DEFINING SOURCING

Expected decline in global trade

Global trade, which was already slowing in 2019, is expected to experience further declines.



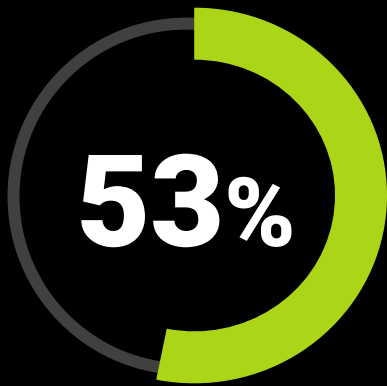


RE-DEFINING SOURCING

Economic uncertainty – COVID-19 impact on manufacturing

RE-DEFINING SOURCING

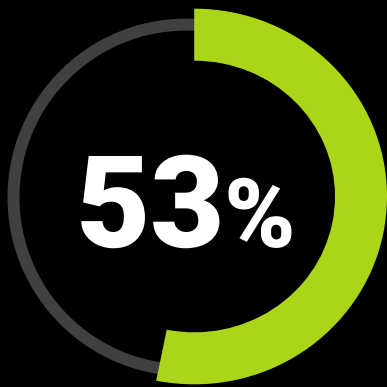
Economic uncertainty – COVID-19 impact on manufacturing



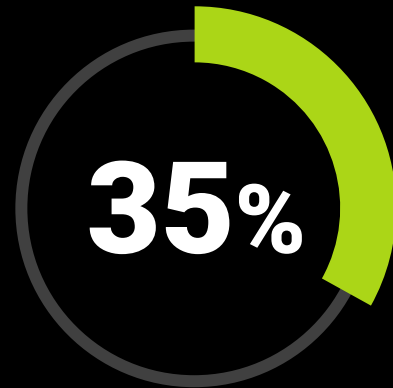
Anticipate a
change in
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RE-DEFINING SOURCING

Economic uncertainty – COVID-19 impact on manufacturing



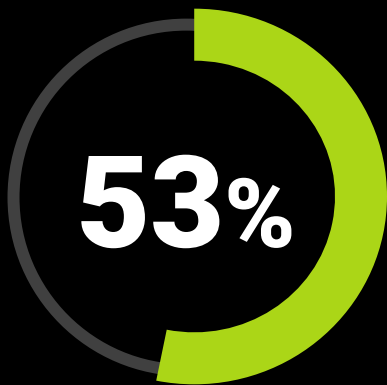
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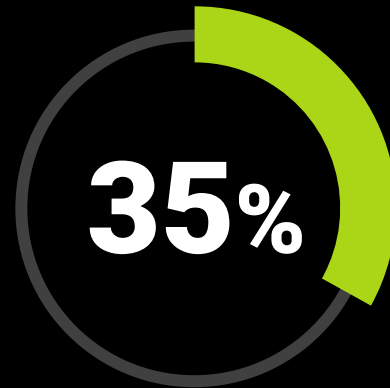
Face significant
supply chain
disruptions

RE-DEFINING SOURCING

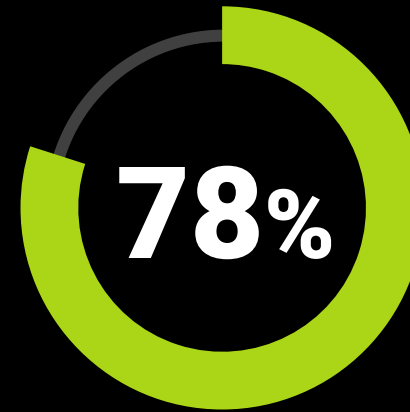
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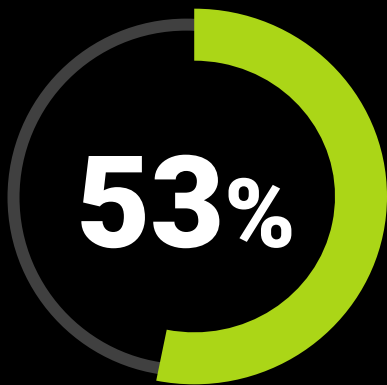
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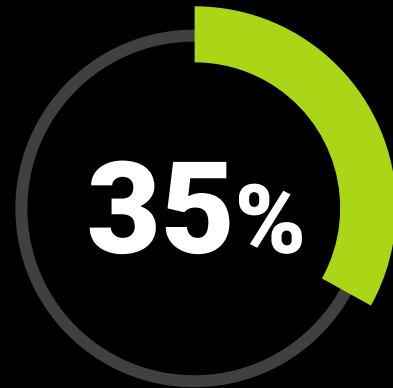
Anticipate a
financial impact as
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RE-DEFINING SOURCING

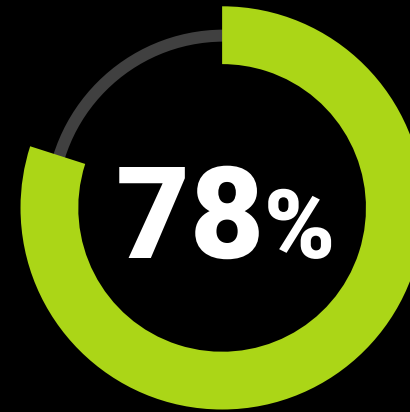
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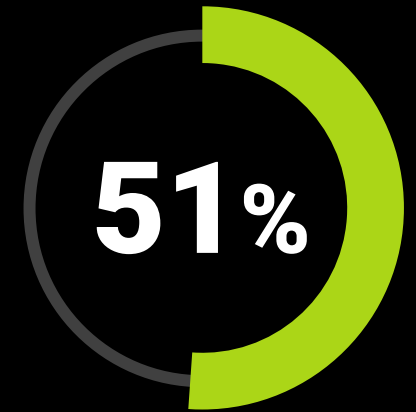
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Face significant
supply chain
disruptions



Anticipate a
financial impact as
a result of the crisis



Have an
emergency
response at
their company

RE-DEFINING SOURCING

Complicating factors – Elsewhere in the supply chain

- **Trans-oceanic shipping capacity is diminishing rapidly**
 - Container shipping lines canceled 250 sailings in Q2 alone, up to one-third of capacity in some routes (Alphaliner, Sea-Intelligence ApS) trying to maintain freight rates in the face of plummeting trade demand
 - Operators have idled a record 13% of capacity, equivalent to three million containers (Alphaliner)
- **Prices going up in the stock market for transportation – >12% increase since March 1 (DAT Solutions LLC) as truckers avoid “Shelter in Place” markets in fear of not having a return load and as restrictions make it difficult for drivers**
- **Air travel has plummeted**
 - Air passenger traffic is down 95% as TSA reported clearing <100,000 daily passengers, down from over 2.2 million
 - More than half of the commercial planes in the world are grounded (Cowen Investment Bank)
 - Airlines worldwide are losing over \$1.6 billion per day



POLLING QUESTION #1

What level of impact has the coronavirus pandemic had on your supply chain?
(Select one answer)

- a. Extensive positive impact
- b. Moderate positive impact
- c. Limited to no impact
- d. Moderate negative impact
- e. Extensive negative impact

A man in a blue shirt stands in the background of a meeting room, looking towards the camera. In the foreground, a woman with dark hair is seated at a table, her back to the camera. The room has large windows and a whiteboard. A black semi-transparent box with a green horizontal bar at the top is overlaid on the image, containing the agenda text.

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RE-DEFINING SOURCING

Guiding posts in redefining sourcing



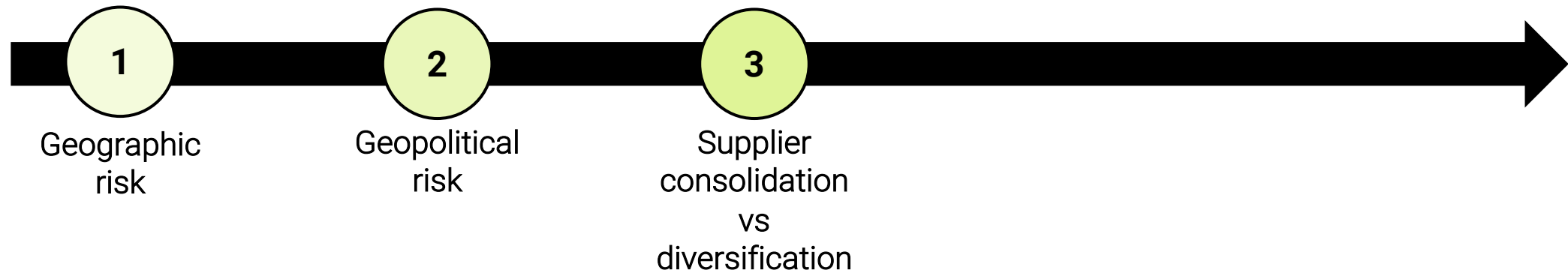
RE-DEFINING SOURCING

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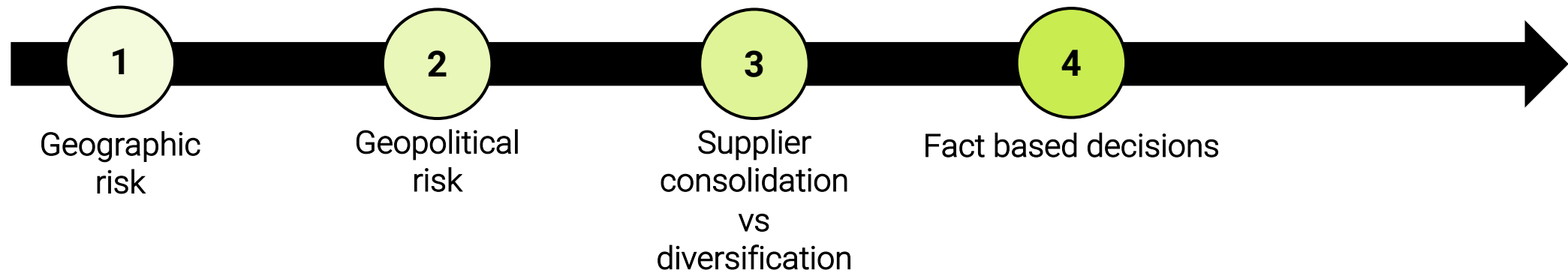
RE-DEFINING SOURCING

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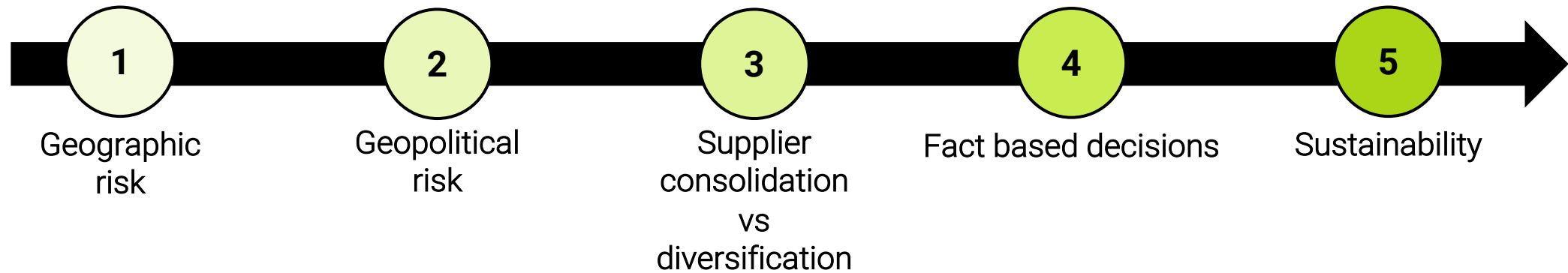
RE-DEFINING SOURCING

Guiding posts in redefining sourcing



RE-DEFINING SOURCING

Guiding posts in redefining sourcing





POLLING QUESTION #2

Has your organization minimized the supply chain risks associated with globalization of business?

(Select one answer)

- a. Intentionally decided globalization is of minimal or no risk
- b. Unintentionally minimized or eliminated risk consideration of globalization
- c. Actively considers global environments in sourcing decisions
- d. Not Applicable

A man in a blue shirt stands in a meeting room, positioned behind a flipchart. To his left is a whiteboard. In the foreground, the back of a person's head and shoulders is visible, looking towards the man. The room is brightly lit, likely by a window on the right side.

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Phases and activities

APPLYING THE 5 GUIDE POSTS AS A FILTER TO RE-DEFINING SOURCING

**ASSESSMENT &
PLANNING**



SOURCING

Phases and activities



APPLYING THE 5 GUIDE POSTS AS A FILTER TO RE-DEFINING SOURCING



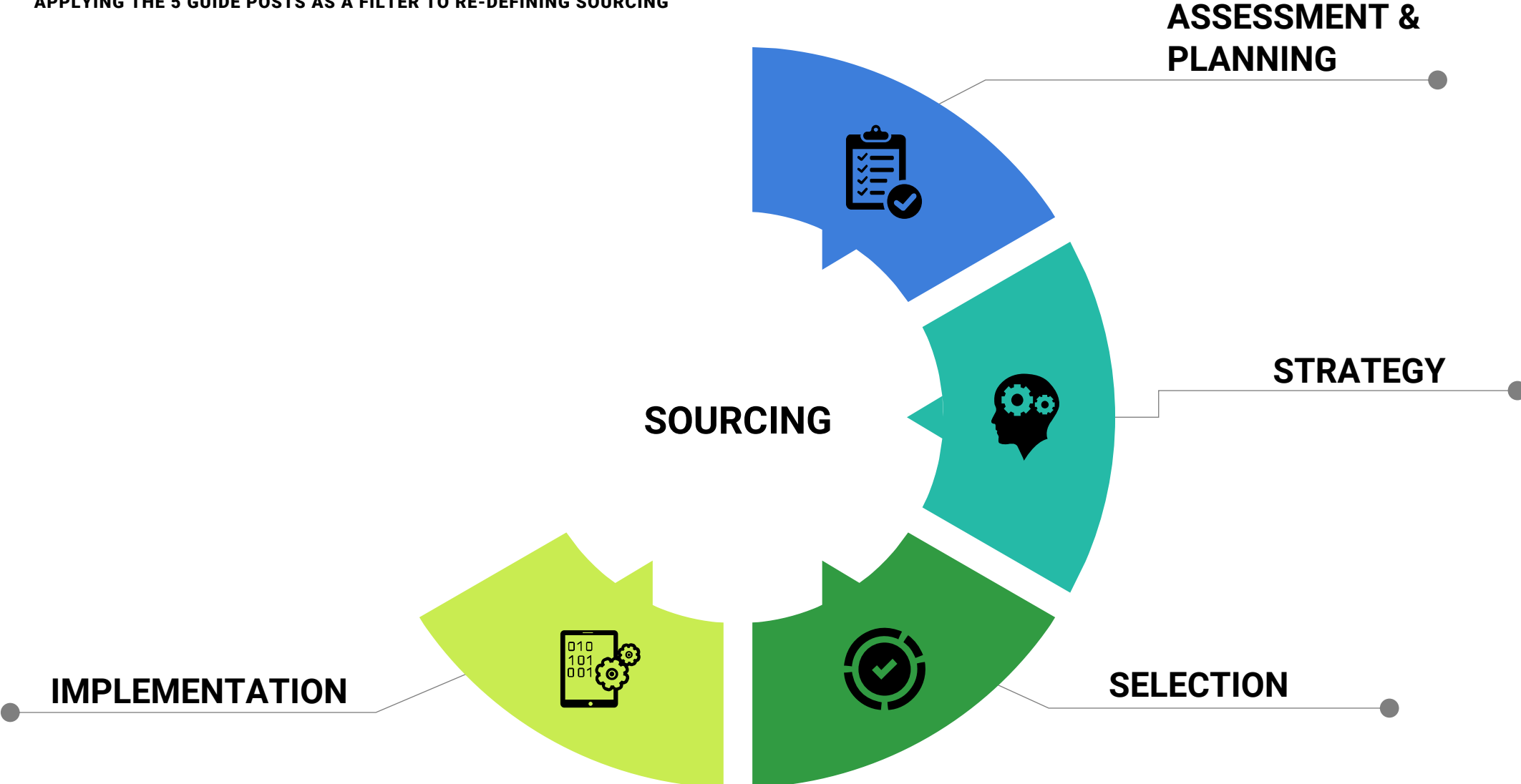
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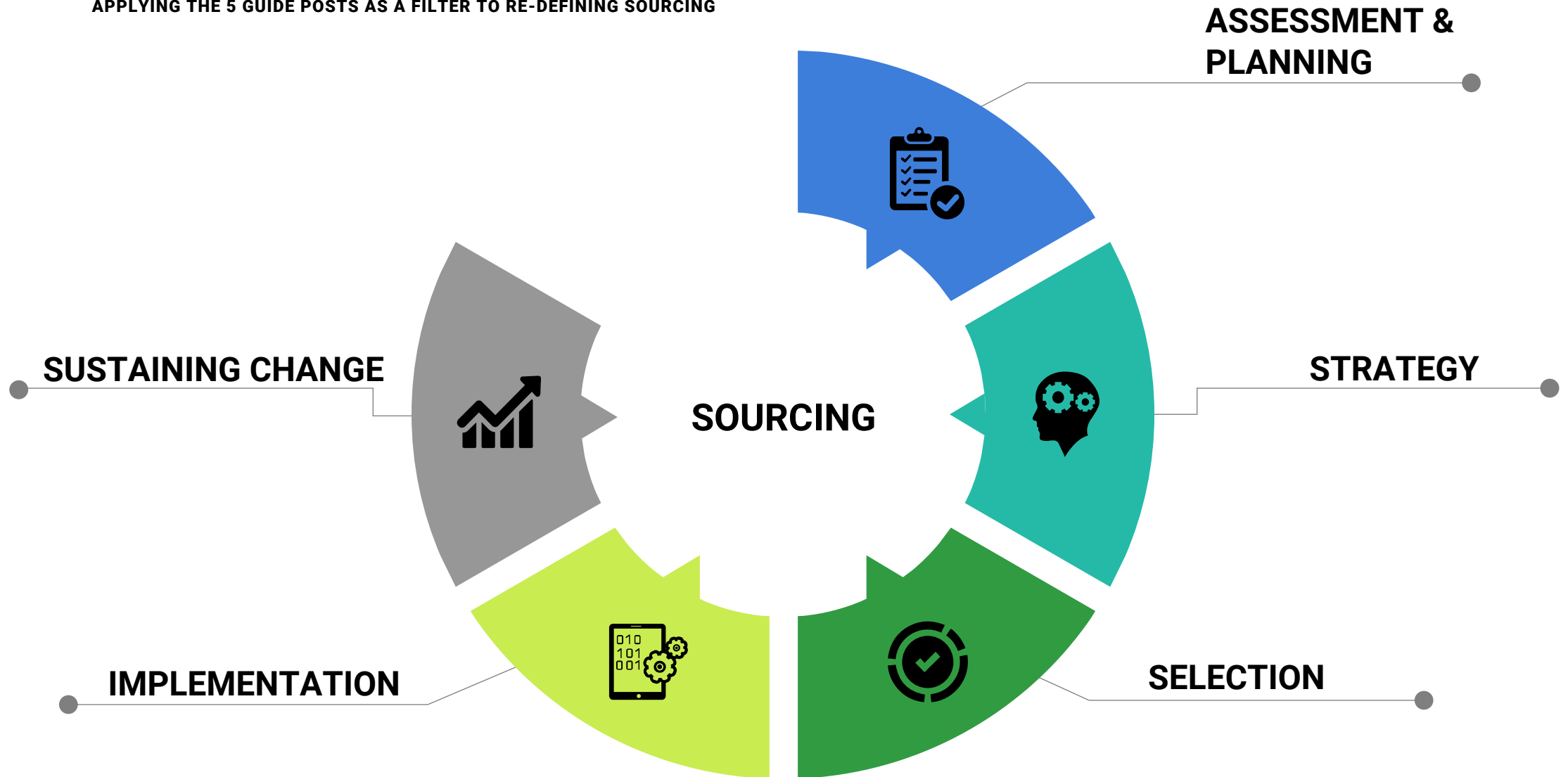
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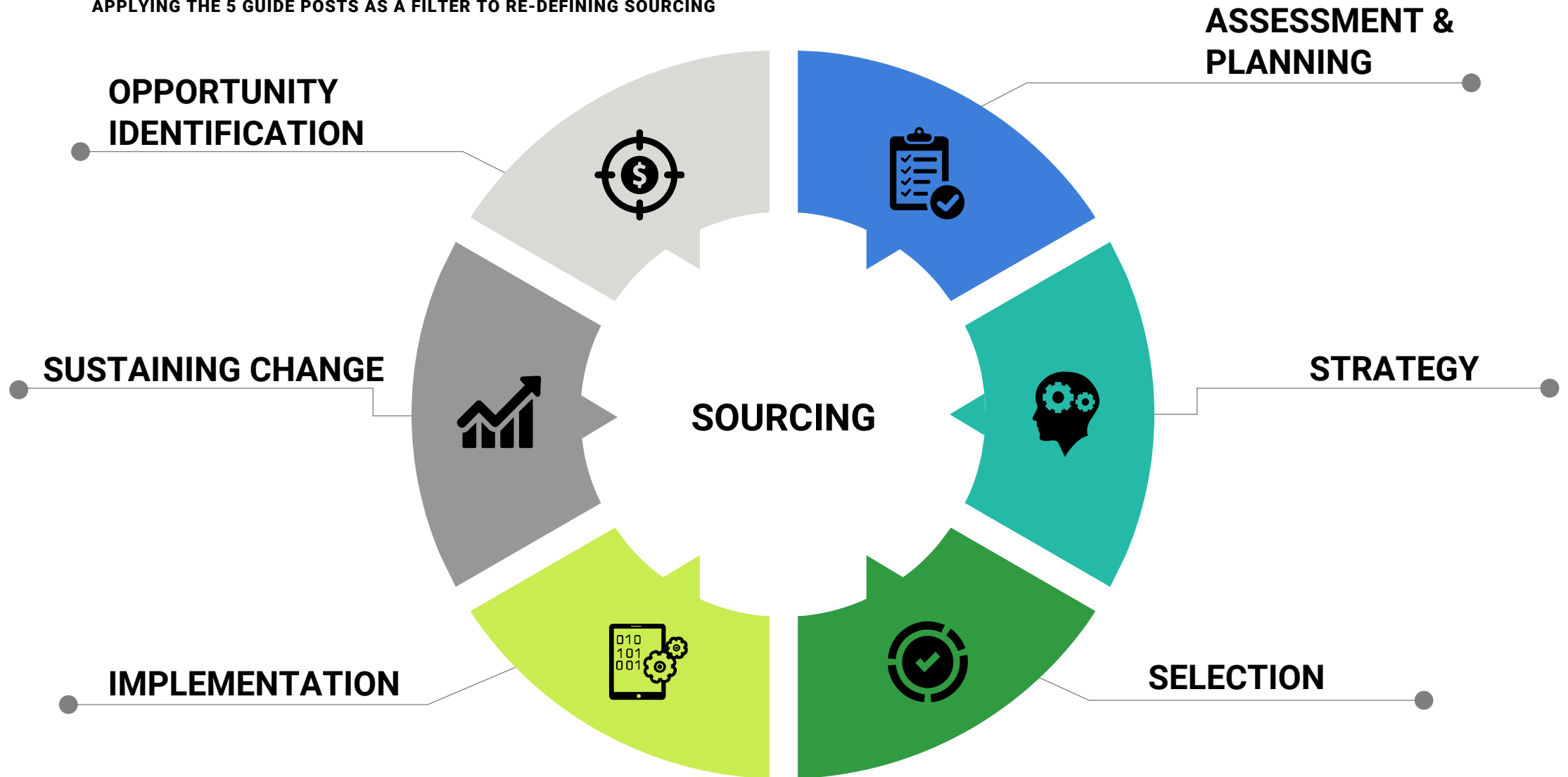
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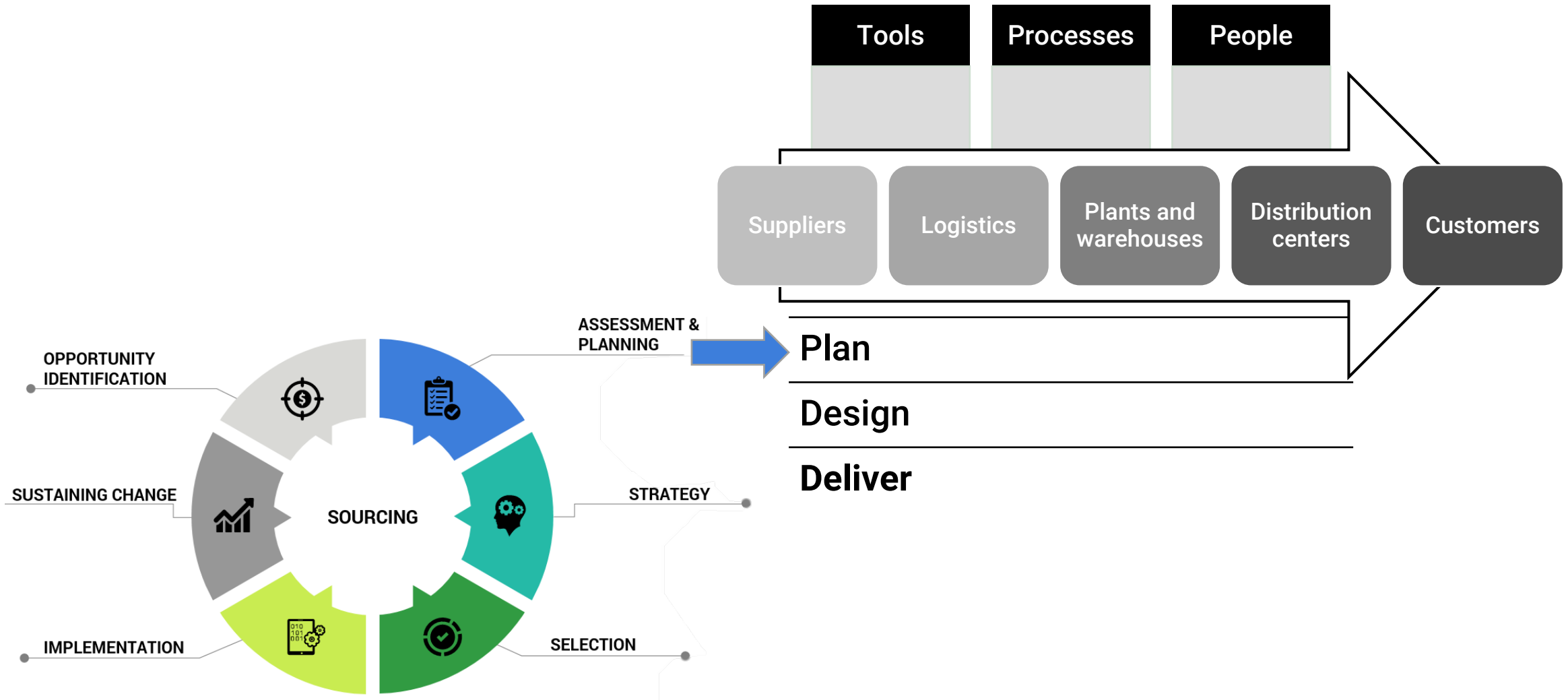


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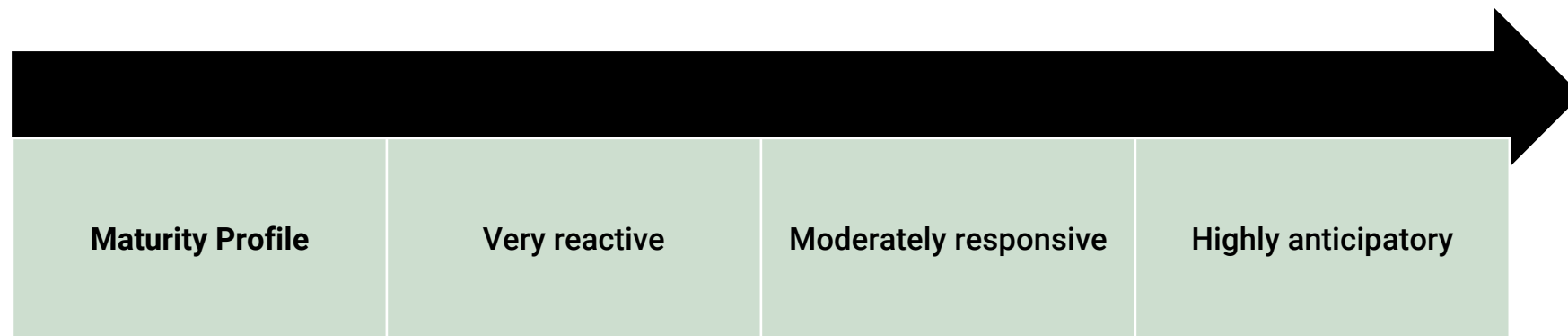


Taking a step back: What is your supply chain designed to achieve?



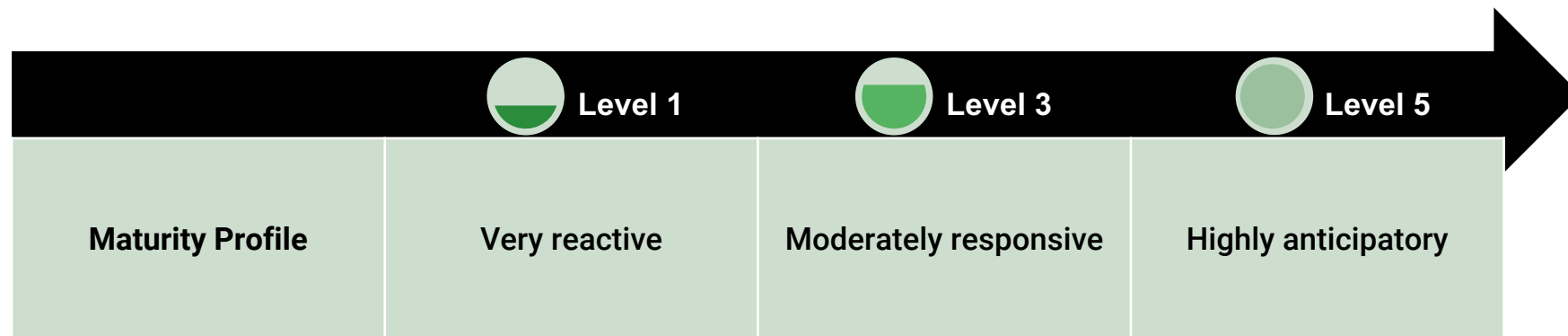
MATURITY MODEL

Sourcing and supply chain planning



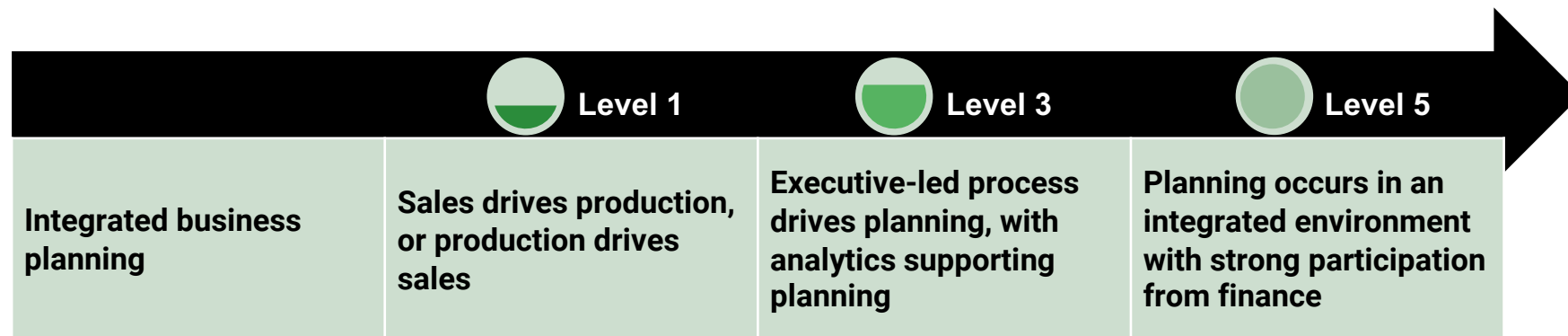
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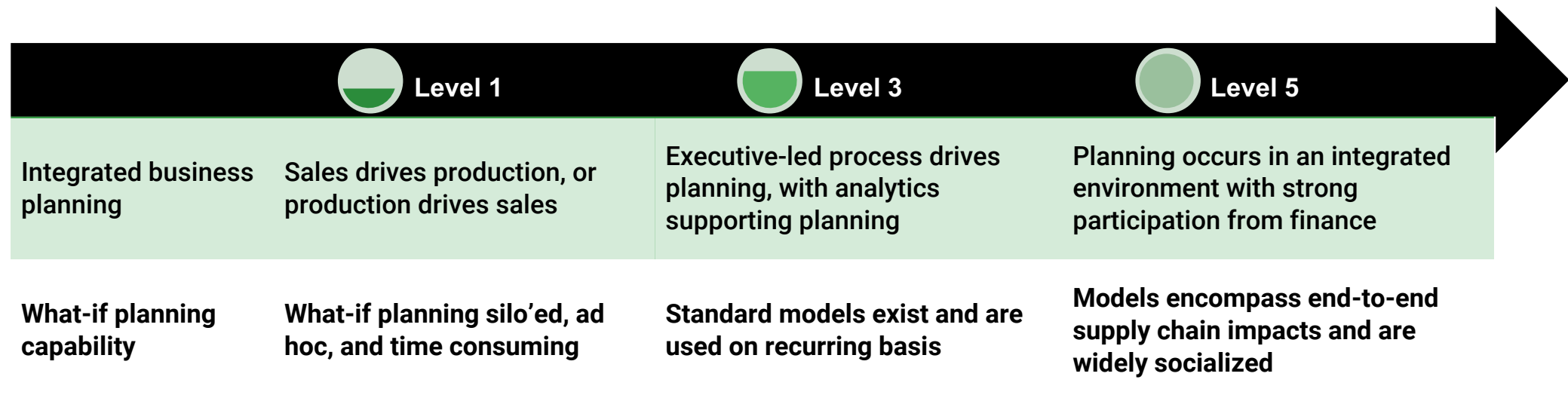
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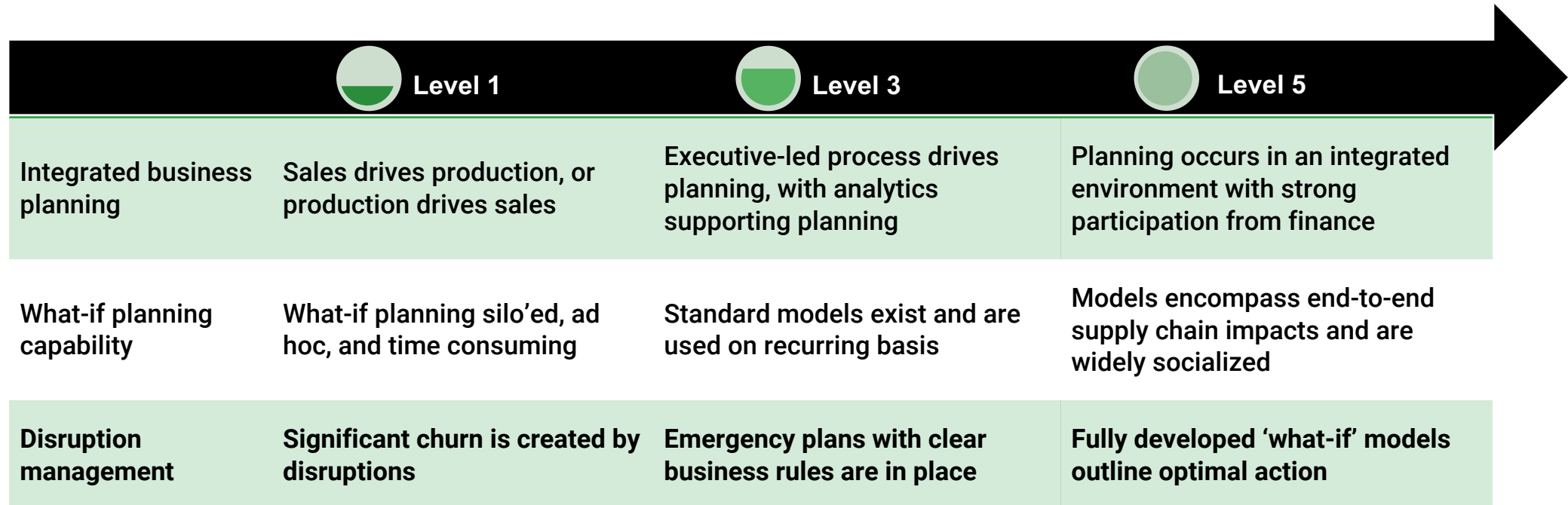
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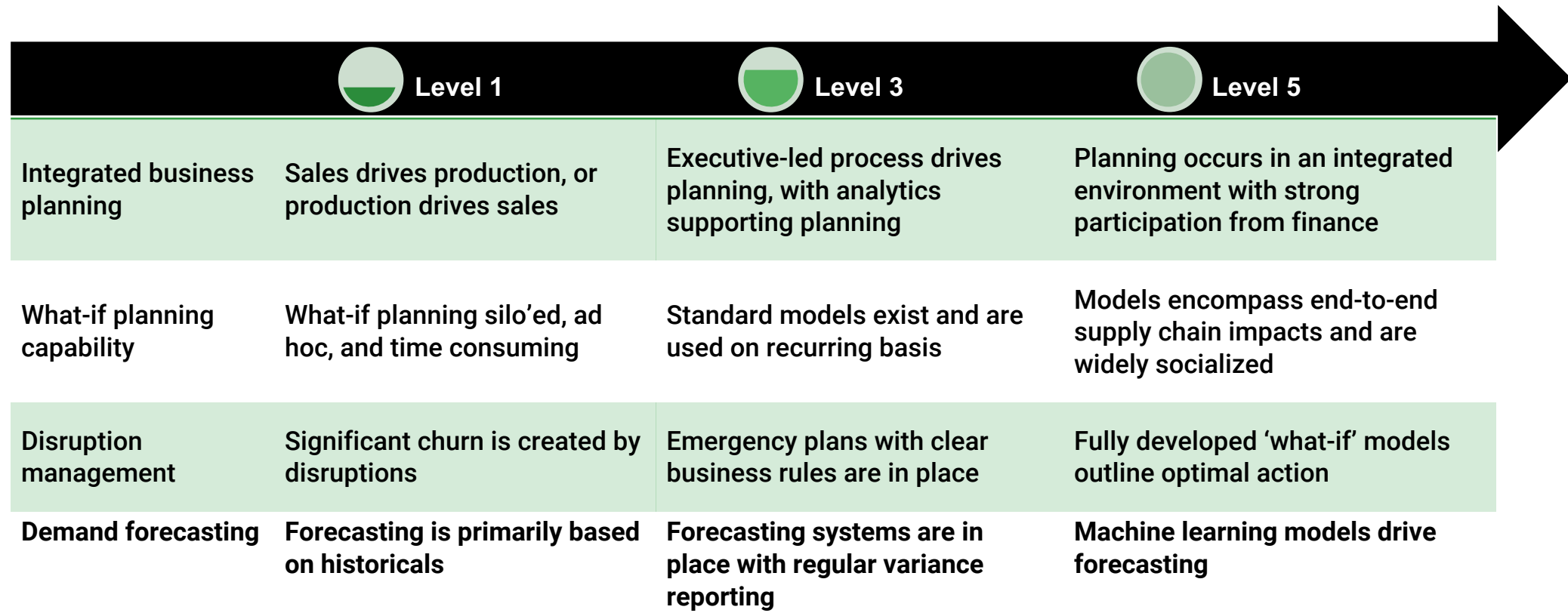
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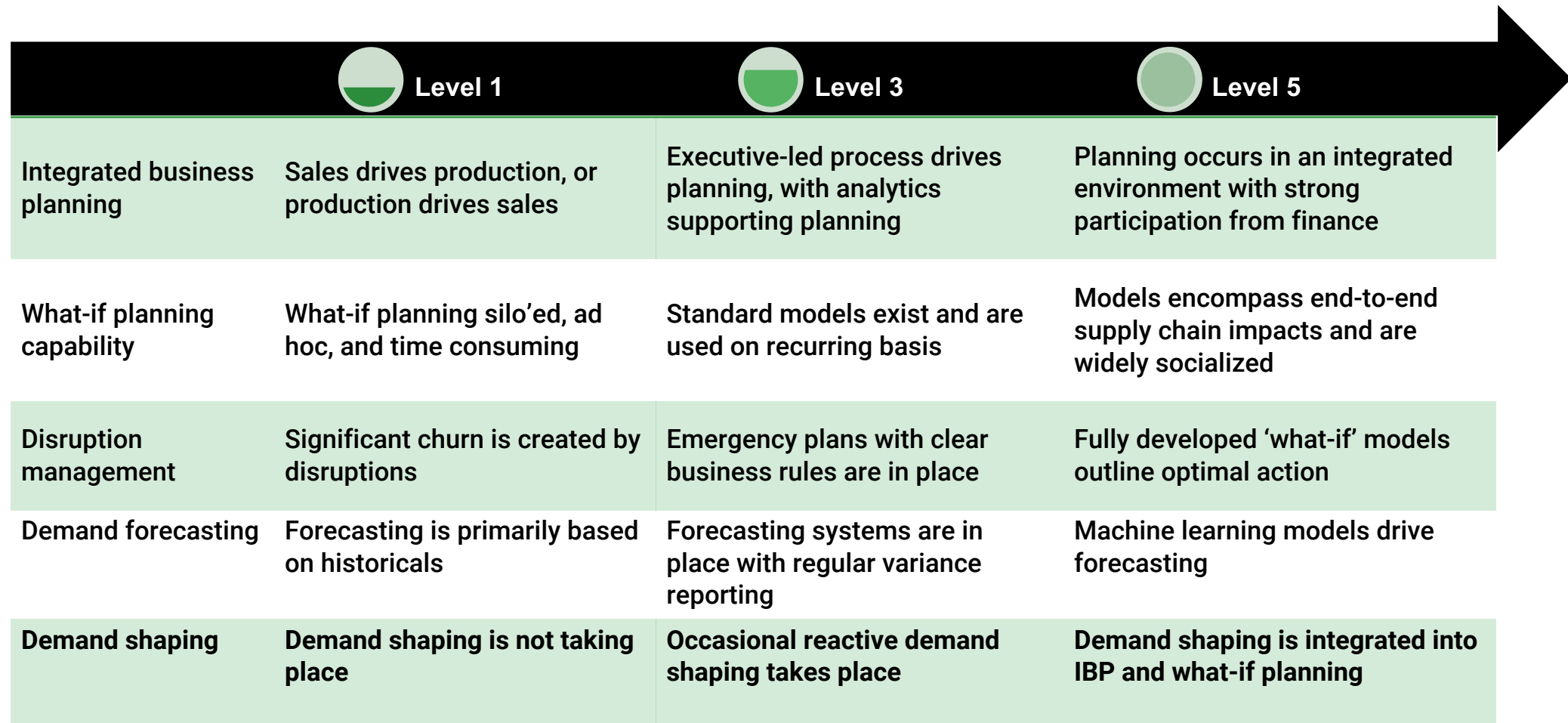
MATURITY MODEL

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MATURITY MODEL




Sourcing and supply chain planning



	Level 1	Level 3	Level 5
Integrated business planning	Sales drives production, or production drives sales	Executive-led process drives planning, with analytics supporting planning	Planning occurs in an integrated environment with strong participation from finance
What-if planning capability	What-if planning silo'ed, ad hoc, and time consuming	Standard models exist and are used on recurring basis	Models encompass end-to-end supply chain impacts and are widely socialized
Disruption management	Significant churn is created by disruptions	Emergency plans with clear business rules are in place	Fully developed 'what-if' models outline optimal action
Demand forecasting	Forecasting is primarily based on historicals	Forecasting systems are in place with regular variance reporting	Machine learning models drive forecasting
Demand shaping	Demand shaping is not taking place	Occasional reactive demand shaping takes place	Demand shaping is integrated into IBP and what-if planning
Inventory management	Business rules like min-maxes are set periodically	Inventory levels are regularly optimized to forecast and simulated	Inventory levels across vendors through customers are optimized

MATURITY MODEL

Sourcing and supply chain planning

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Partner integration	Plans are shared with vendors and customers, as appropriate	Partners are involved in planning, in particular constraint management	Partners are leveraged and some execution is devolved



Summary Financial Statements

Income Statement

	2018	2017	YoY Change		
			\$	%	
Revenue	1,009,381K	907,008K	102,373K	11%	→
Cost of Sales	845,778K	795,135K	50,643K	6%	→
Interest Expense	4,059K	5,846K	(1,787K)	-31%	
Other Expense(Income)	(81,846K)	(150,909K)	69,063K	46%	
General and Administrative Expenses	49,145K	37,526K	11,619K	31%	→
Gross Profit	163,603K	111,873K	51,731K	46%	
Net Income	192,246K	219,410K	(27,164K)	-12%	



[Links to Other KPIs](#)

PE Financial Statements:



Supply Chain Optimization:



Balance Sheet

ASSETS

	2018	2017	YoY Change		
			\$	%	
Cash and cash equivalents	117,834K	167,242K	(49,408K)	-30%	
Investments / Securities	299,034K	294,565K	4,469K	2%	
Accounts receivable / Loans receivable	12,462K	21,191K	(8,729K)	-41%	→
Inventories	370,237K	327,324K	42,913K	13%	→
Prepays and other assets	4,316K	3,992K	324K	8%	
Property, plant, and equipment	516,750K	441,798K	74,952K	17%	
Intangible assets and goodwill	0K	192K	(192K)	-100%	
Other	183,526K	190,126K	(6,600K)	-3%	
Grand Total	1,504,160K	1,446,430K	57,730K	4%	

Liabilities and Equity

	2018	2017	YoY Change		
			\$	%	
Accounts payable & accrued liabilities	61,047K	90,202K	(29,155K)	-32%	
Long-term debt borrowings	2,628K	55,772K	(53,144K)	-95%	
Equity	1,248,239K	1,081,045K	167,194K	15%	
Net Income	192,246K	219,410K			
Total Liabilities and Equity	1,504,160K	1,446,430K			

Summary Financial Statements

Income Statement

	2017	2016
Revenue	1,071,911.4	917,839.1
Cost of Sales	645,779.0	718,229.6
Manufacturing Expenses	4,299.4	9,849.4
Other Expenses (Income)	31,894.0	(3,307.9)
General and Administrative Expenses	48,149.5	37,529.6
Gross Profit	311,877.5	118,871.6
Net Income	182,248.5	109,433.7

Balance Sheet

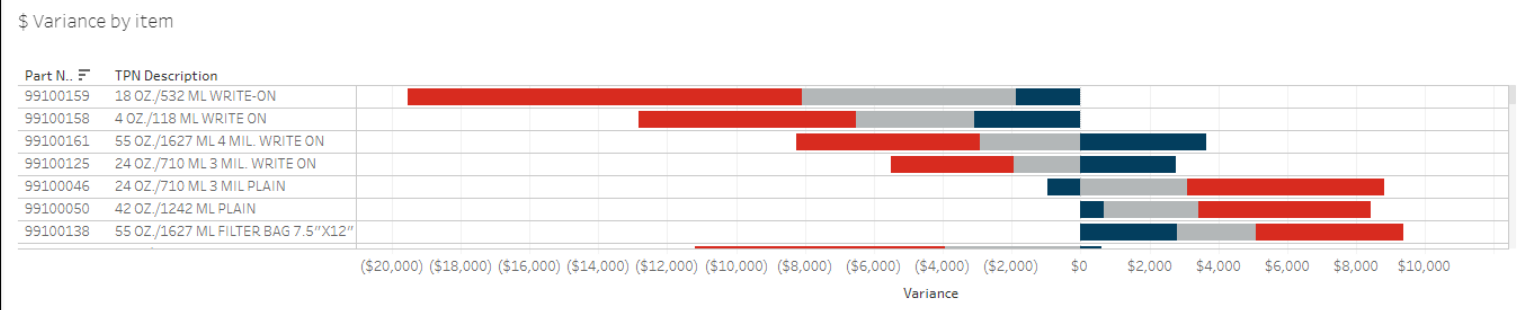
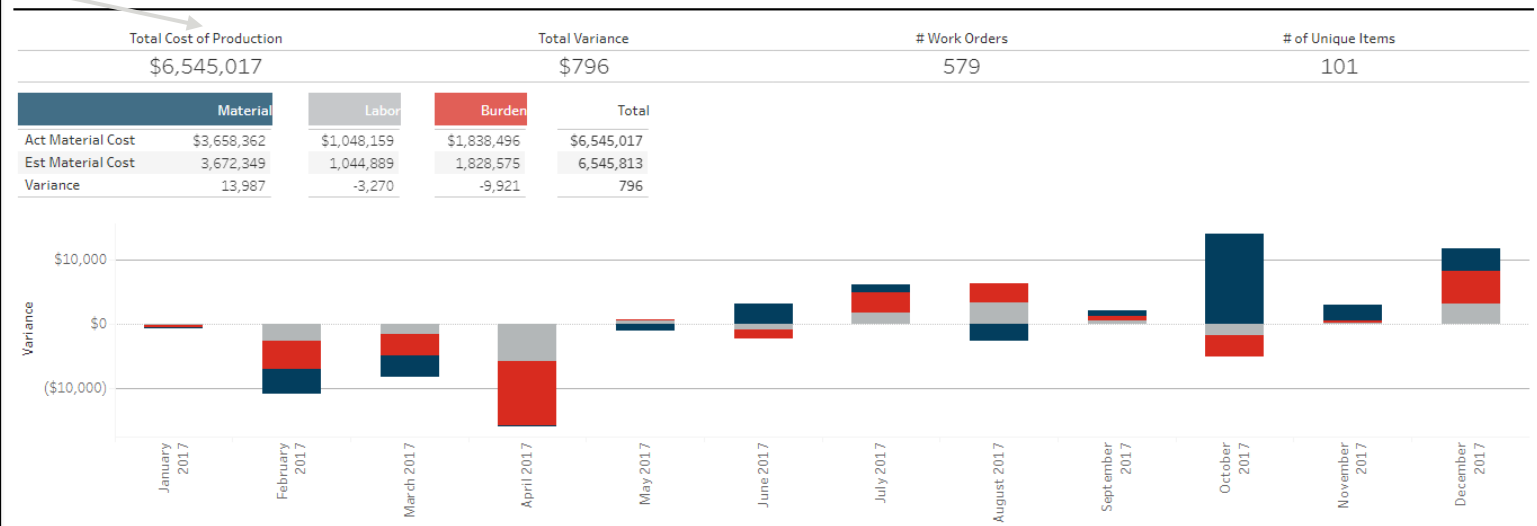
	2017	2016
Cash and cash equivalents	11,081.0	14,292.1
Investments/Securities	288,536.0	216,656.0
Accounts receivable/Trade receivable	12,822.0	11,211.0
Inventory	219,417.0	217,204.0
Prepaid and other assets	4,126.0	3,982.0
Property, plant, and equipment	819,756.0	417,799.0
Intangible assets and goodwill	0.0	1,024.0
Other	188,826.0	186,128.0
Grand Total	1,524,138.0	1,198,096.0

Liabilities and Equity

	2017	2016
Accounts payable/Accounts payable	61,847.0	40,212.0
Long-term debt/liabilities	7,619.0	10,779.0
Equity	1,249,229.0	1,047,045.0
Net Income	182,248.5	109,433.7
Total Liabilities and Equity	1,524,138.0	1,198,096.0

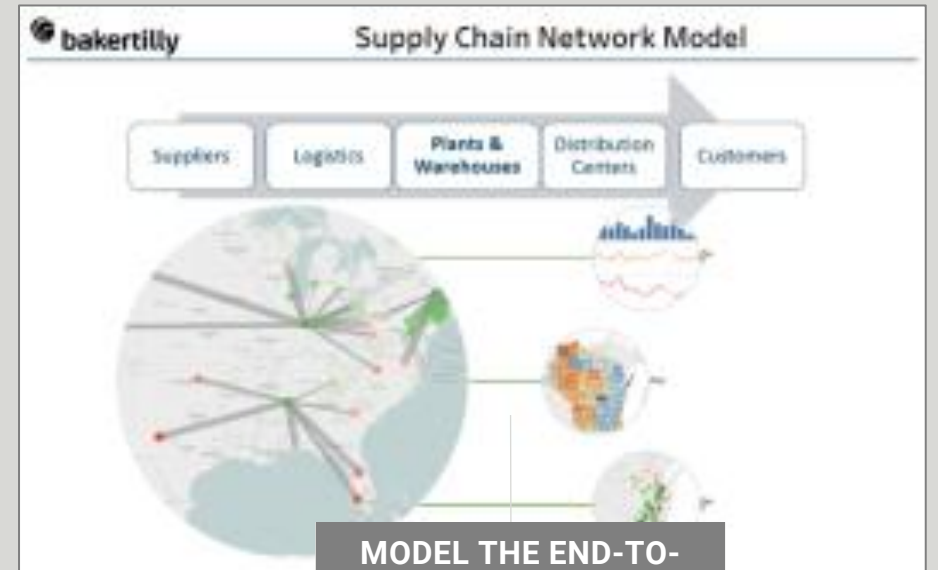
Navigation: Disclaimer | 0.Summary Financials | 0.1 PE Financials | 1.1.Distributor Sales & Profit | 1.2.Distributor Geospatial S&P | 2.1.Variance Analysis | 2.2.1.Inventory Scatter | 2.2.2.Material Usage | 2.3.Inventory

Manufacturing Variance Analysis





QUANTIFY ASSET CAPABILITIES

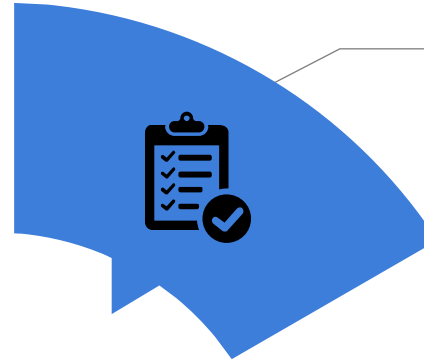


MODEL THE END-TO-END SUPPLY CHAIN



DETAILED SCENARIO FORECASTS

Phases and key activities

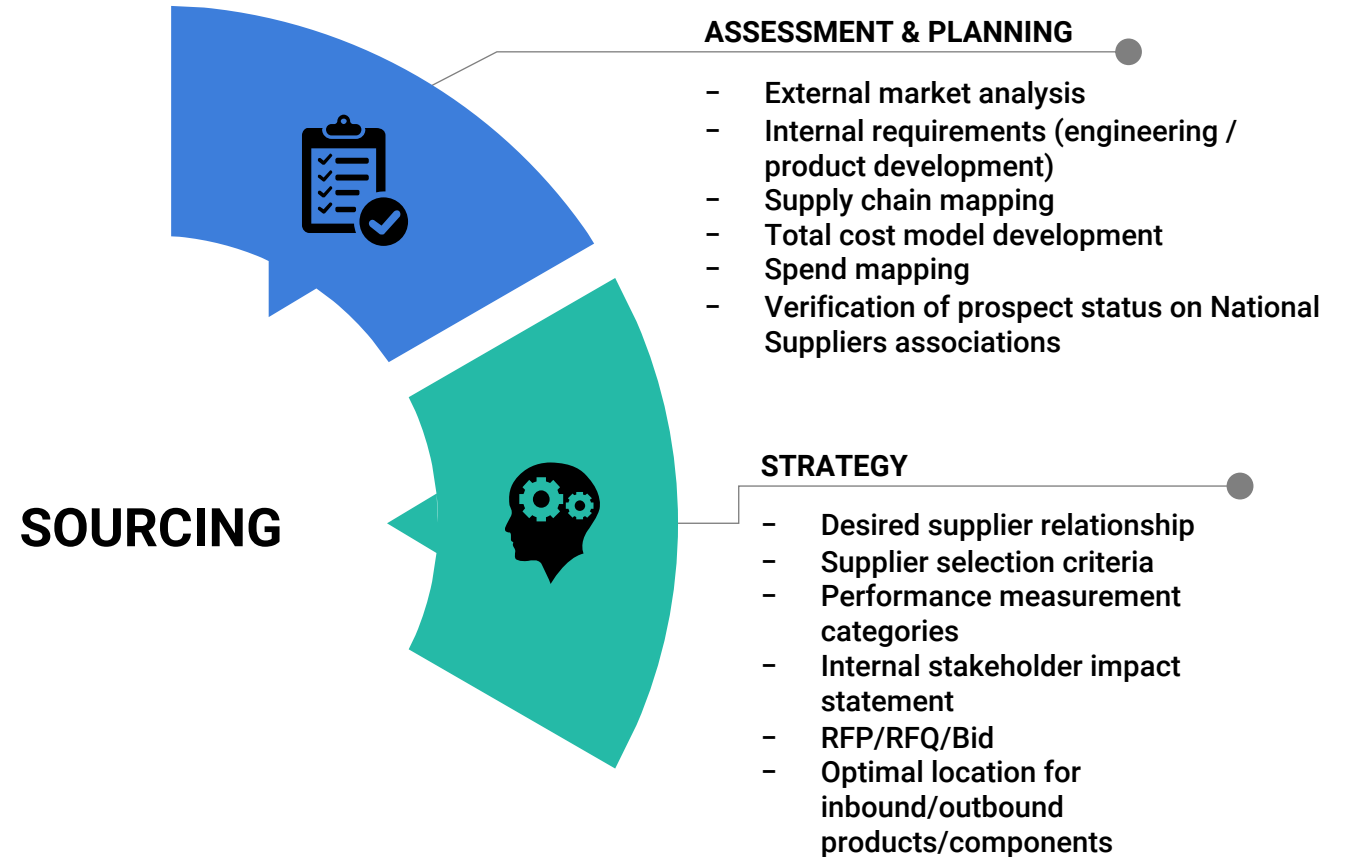


ASSESSMENT & PLANNING

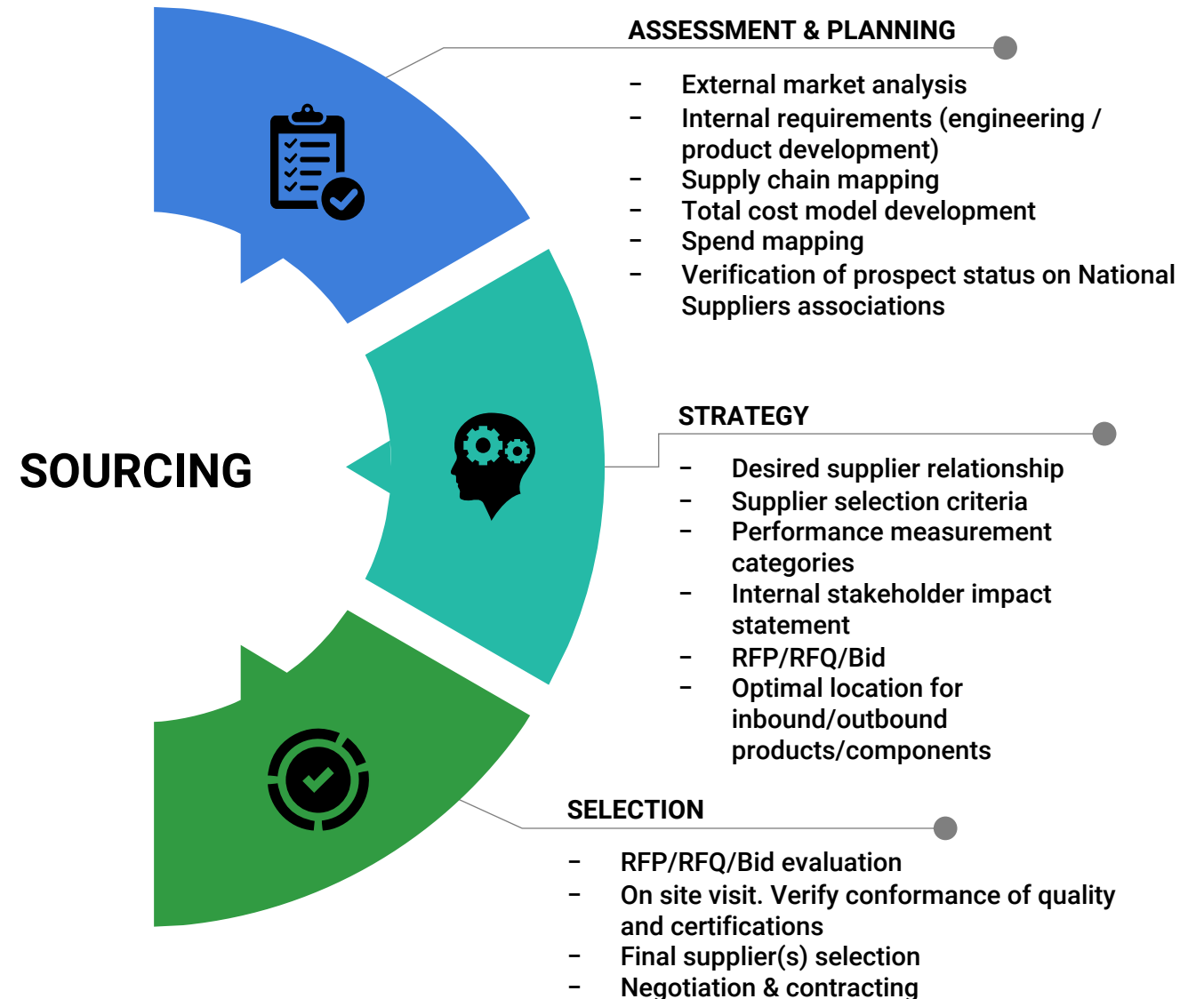
- External market analysis
- Internal requirements (engineering / product development)
- Supply chain mapping
- Total cost model development
- Spend mapping
- Verification of prospect status on National Suppliers associations

SOURCING

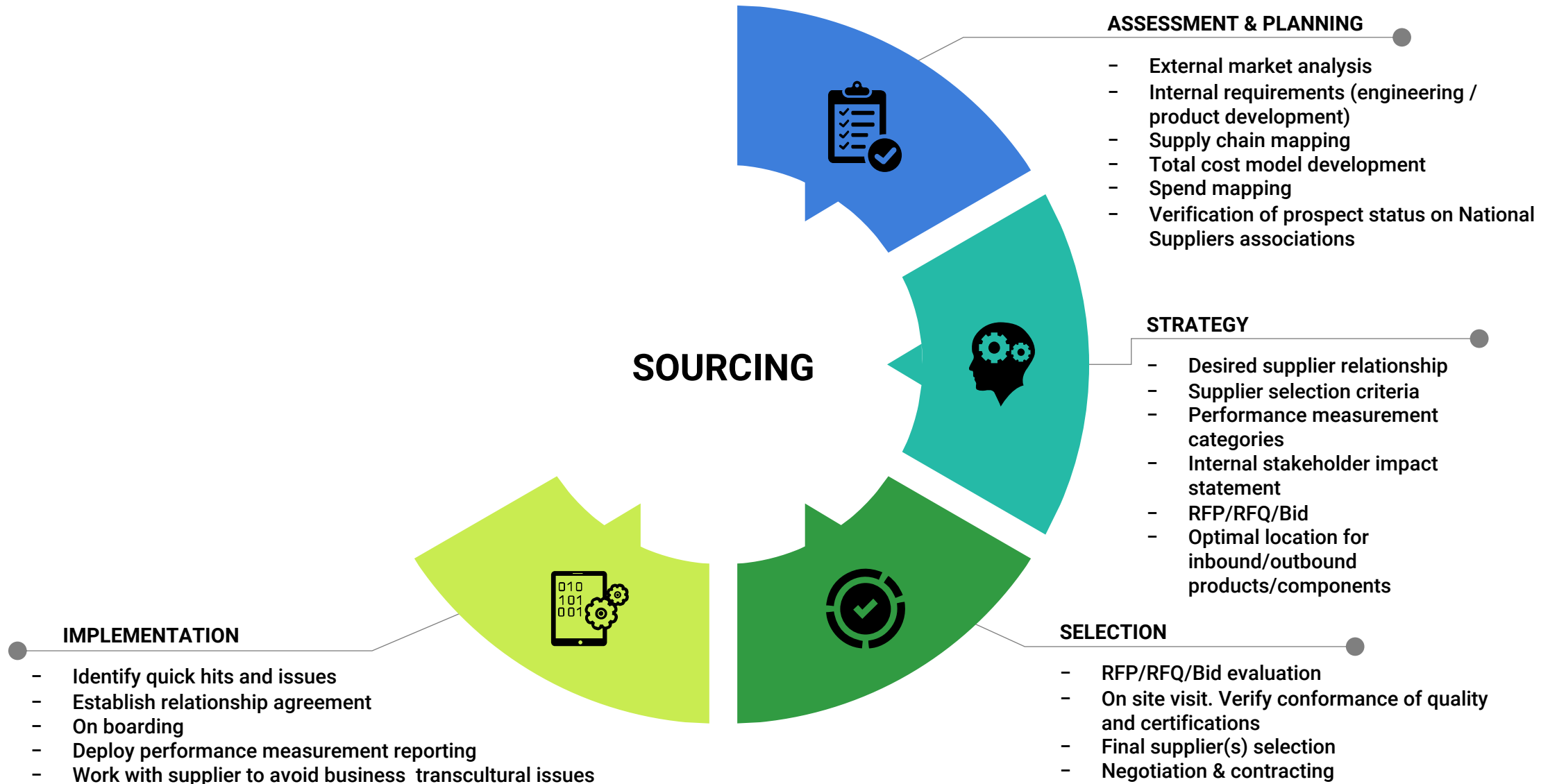
Phases and key activities



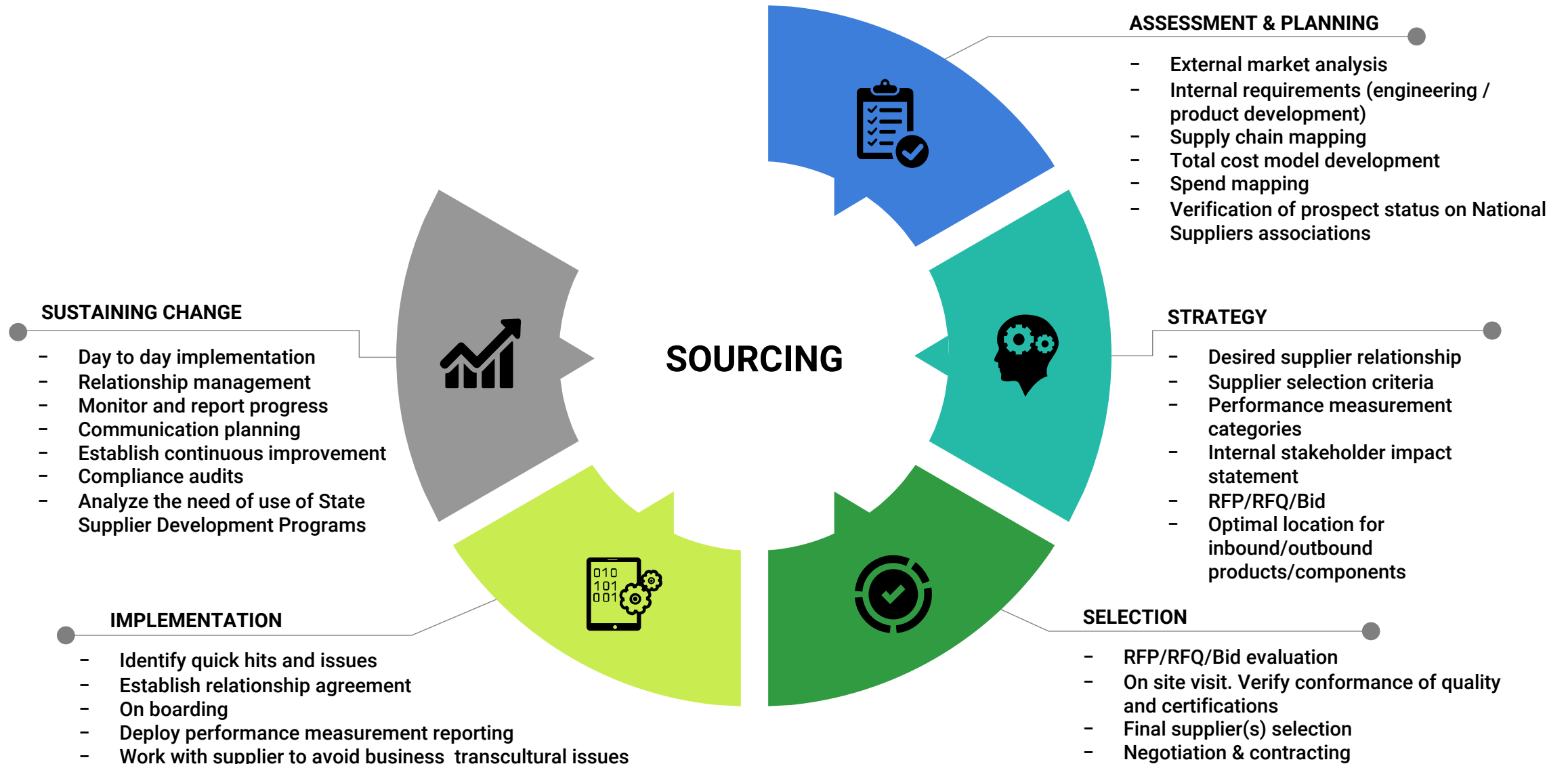
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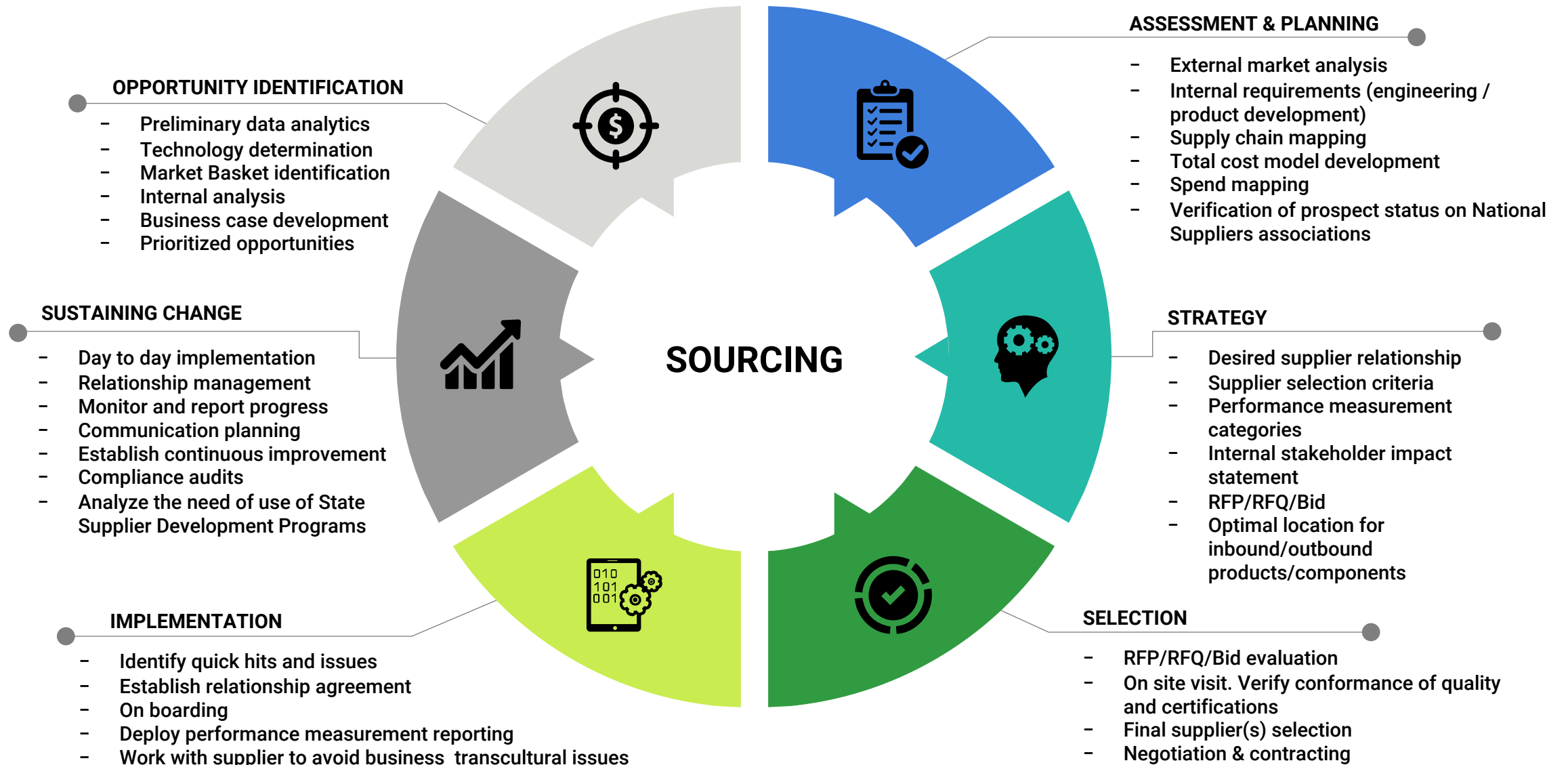
Phases and key activities



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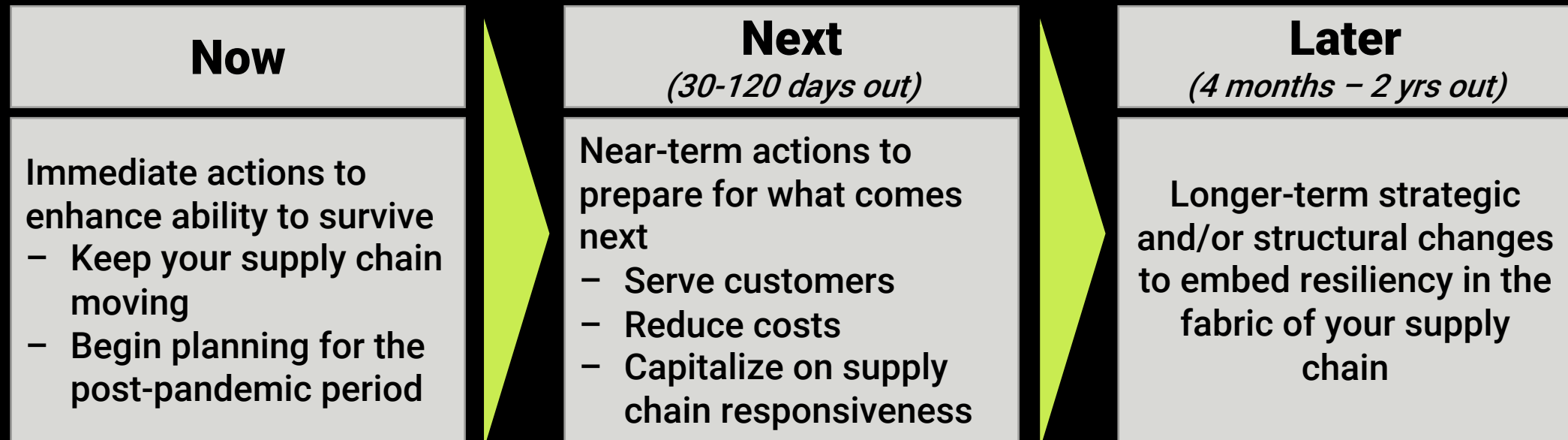
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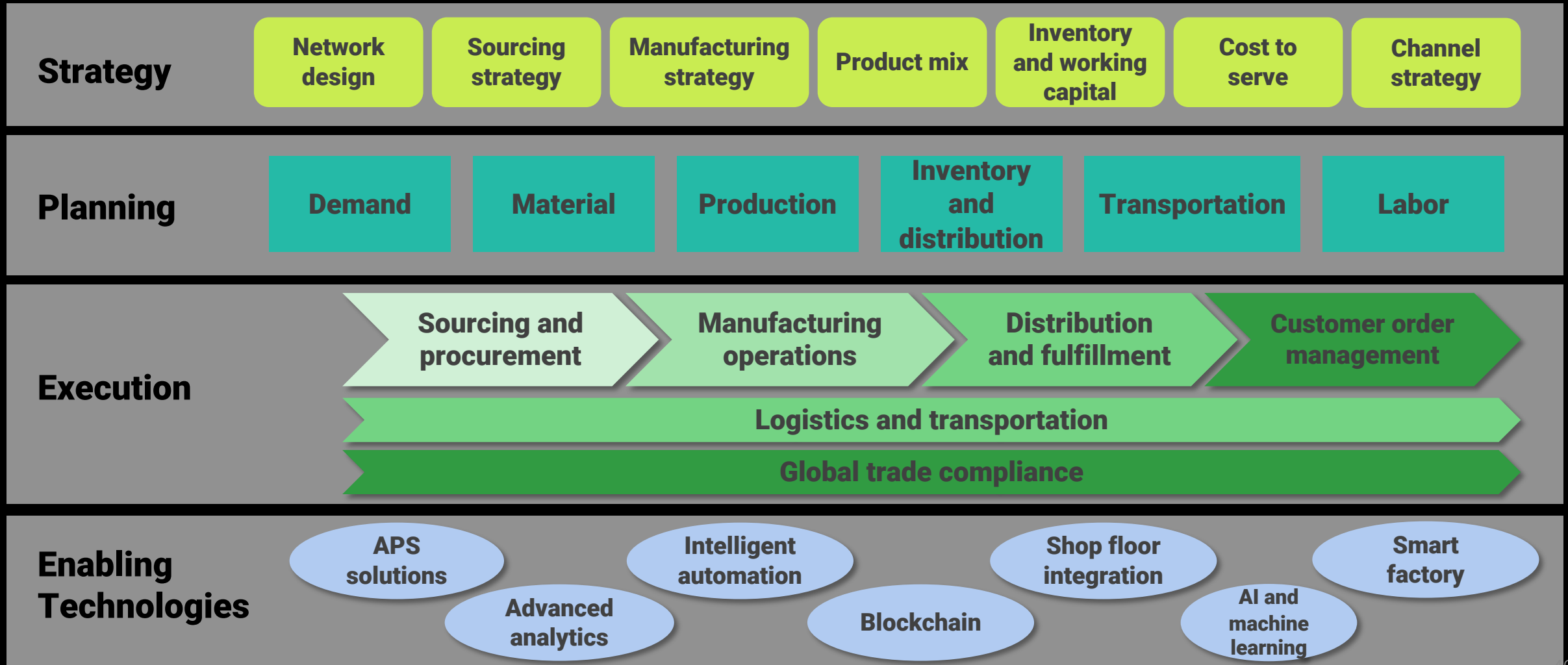
RE-DEFINING SOURCING

Implement actions to stabilize and improve the resiliency of your supply chain

Three activity horizons



Contextualizing the supply chain



Now

Crisis management

- Establish a team to handle crisis management and rapid response actions
- Cross-functional, including communications
- Implement a virtual “war room” using Huddle, Teams, SharePoint, Box, Dropbox, Google, etc.

Liquidity management

- Uses of cash restricted to critical needs
- Adjust working capital requirements
- Consider tapping into liquidity sources
- Aggressive cost control

Suppliers

- Engage and communicate with suppliers
- Mitigate potential disruptions due to supply/supplier constraints
- Secure capacity and supplies where possible

Sourcing

- Understand your suppliers’ upstream supply networks – identify sources of critical materials and assess potential shortages
- Begin to understand and evaluate alternative sources of supply for key materials, components, and equipment



Customers

- Engage and communicate with customers
- Understand customer needs and expectations; prioritize products & manage customer expectations regarding delays

Inventory

- Review safety stocks and inventory levels of critical products and materials across supply chain: Ration critical parts, review aftermarket supply banks and secure supply for production, update inventory policies in key supply chain and ERP systems

Manufacturing and operations

- Assess options, if any, for redirecting manufacturing to products that assist in combating COVID-19
- Provide appropriate hygiene and safety protocols and supplies for personnel

Transportation and logistics

- Communicate with carriers to understand service reductions and capabilities to mitigate potential disruptions; Investigate and procure or reserve future capacity, particularly international shipping and air freight
- Begin assessing alternate providers



Forward planning

- Conduct scenario planning analyses to develop executable plans for post-pandemic period
- Plan for industry consolidation and M&A, including opportunities and risks
- Determine if overall supply chain strategy needs to be modified (e.g. shift from efficiency to responsiveness)
- Consider implementing integrated supply chain planning tools to integrate demand, production, and distribution planning and provide sophisticated what-if modeling capabilities

Customers

- Strategically refocus product mix to align with customer priorities and eliminate complexity
- Assess opportunities for introduction of new products and/or expansion into new markets

Sourcing and procurement

- Renegotiate contracts and longer-term orders with suppliers
- Complete sourcing analysis, including upstream suppliers, to your Tier 1's; establish alternate supply relationships for critical materials, supplies, and equipment
- Consider sourcing critical materials and supplies from on- or near-shore suppliers



Manufacturing

- Assess manufacturing strategy and use of contract service providers, jobbers, etc.
- Consider insourcing production of components or parts previously sourced from high risk regions

Transportation and logistics

- Establish alternate service providers based on capacity constraints
- Procure air cargo capacity to offset likely long lead-times for ocean freight

Labor

- Assess labor availability and cost across manufacturing and distribution in key locations in light of likely scenarios for recovery ramp up
- Consider shifting activities to markets with greater availability or cost advantages

Customers

- Consider redesigning channel and customer service strategy to allow greater focus on your A and B customers
- Plan to expand and optimize by bolstering online channels

Next



Technology

- Accelerate the use of bots and intelligent automation to eliminate manual and repetitive work ahead of the recovery
- Upgrade and enhance ERP and related software to streamline and integrate operational functions
- Implement advanced analytics and AI to enable intelligent responsiveness to changing conditions during recovery period
- Accelerate the use of existing manufacturing technologies such as 3D printing

Later



- Targeted M&A transactions for capacity, market share, or innovation
- Accelerate the shift to digital:
 - Online channels for sales and customer service
 - Analytics and AI
 - Intelligent automation
- Restructure supply chain for resiliency
 - Fully implement supply chain network redesign across manufacturing and distribution, including alternate sources and on- or near-shoring
 - Fully implement redesigned sourcing strategies for critical materials, components, or equipment
 - Implement integrated digital supply chain planning and modeling tools
- Prepare for significant rehiring and retraining efforts as operations ramp-up



POLLING QUESTION #3

Which of the following areas of sourcing presents the greatest challenges to your business?

(Select one answer)

- a. Country of origin
- b. Market basket identification
- c. Sustainability
- d. Tax and tariff optimization
- e. Total cost of ownership



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Five actions to guide your next steps



Let's connect

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- *Resources*
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Jeff Jorge
Principal, Supply Chain Practice Leader
jeff.jorge@bakertilly.com
+1 (248) 368-8798



Cameron Reid
Sr. Manager, Sourcing Practice Leader
cameron.reid@bakertilly.com
+1 (262) 385-4994



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