

Designing supply chain networks

March 2021

Vaughan Grant

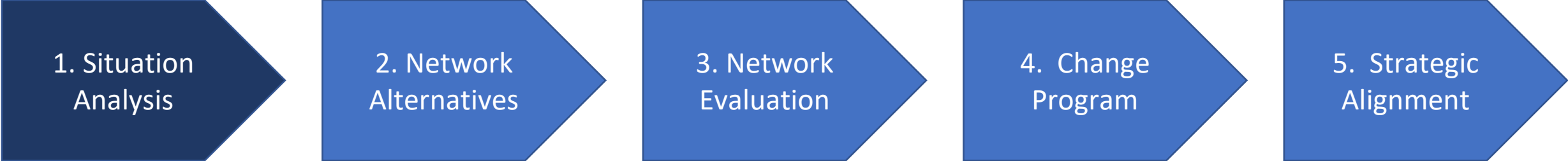
Practical Approach to Supply Chain Network Design

- What's the purpose of a supply chain network?
 - Improving inventory availability for customers whilst reducing working capital
 - Increasing customer visibility, transparency, and traceability of its supply chain
 - Reducing supply chain cost to serve, from international operations, distribution centre operations, transport services, and transacting cost.
 - Optimizing capacity whilst building a future proofed and resilient network

Practical Approach to Supply Chain Network Design

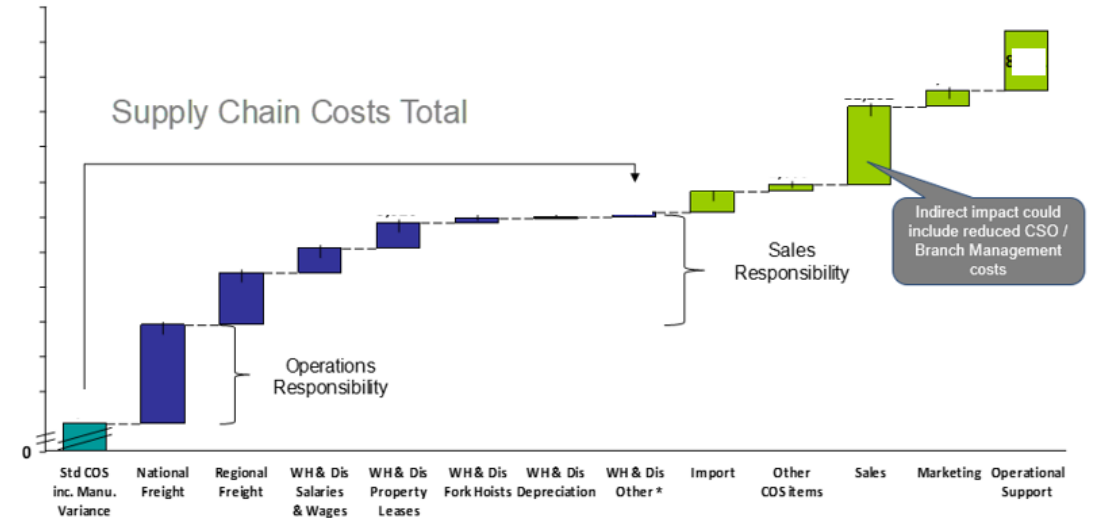
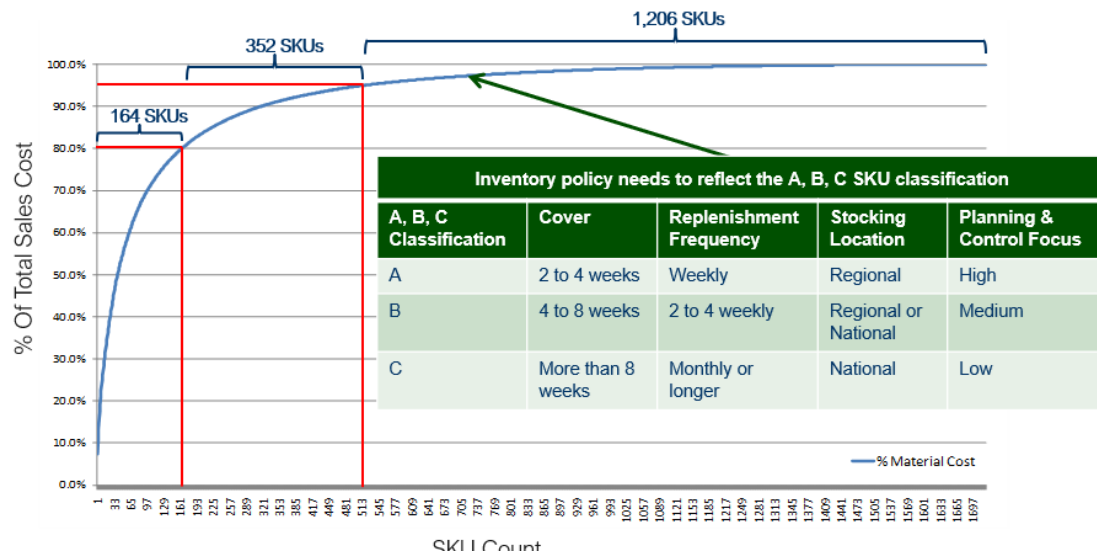
- High level factors to consider
 - **Customer expectations** for range, service, and cost
 - Supply chain **channels to market** that best meet customers needs
 - **Inventory** ordering / holding practices to optimise working capital and network footprint
 - What supply chain **network assets** required to deploy to meet customer expectations?
 - **Transport** network to execute
 - **Network cost, now and in the future**
 - **Capabilities** (people, policy, process, digital capabilities, capital) to execute; and the associated business case
 - Transformation **program**, speed and risks **to execute** the strategy

A five-stage approach to network design



1. Situation Analysis

Identifying the current state – data driven



Agreeing the business drivers – customer first


- Service Level
- Availability
- Lead-times
- Customer Promise





-  250 core trade items always in stock
-  Over 100,000 products available
-  1 hour order & pick up service
-  To answer your call within 30 seconds or we'll call you back within the hour
-  Accurate invoicing - no surprises
-  To deliver to site in full & on time or we refund the delivery fee
-  To deliver your frame & truss order within the agreed time or we pay you \$200 per day


Conditions apply. Find out more in-store.


"I guarantee it."




- 

1000+ everyday essentials in stock, always.
If not, we'll give you a \$50 credit.
- 

Orders ready for pick up in 30 mins or delivered within 2 hrs
or we'll give you a \$50 credit.
- 

Accurate quotes.
You pay what we quote.
- 

Credits processed within 5 days.
- 

We'll answer the phone within 5 rings.

Agreeing the business drivers – future orientated

- Volume Growth
- Procurement
- New Categories
- Cost Changes
- Geographic Shift
- Competitor Insights
- Customer Collect
- Freight Capability
- Sales Strategy
- BCP requirements
- Co-location with Competitors/ Customers
- Leveraging Competitive Adv.

1. Situation Analysis

Inventory Impacts – now and in the future



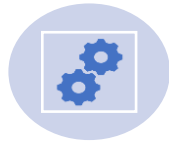
Core range definition



Source of supply rules



Availability requirements



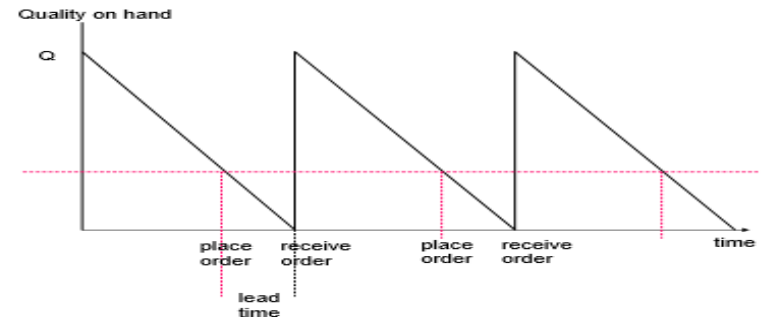
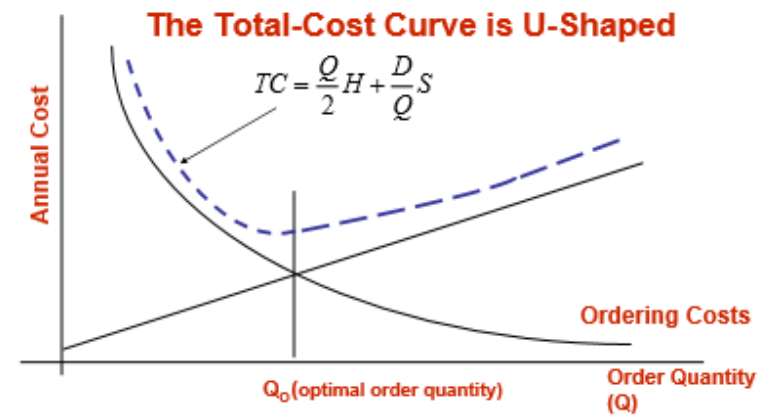
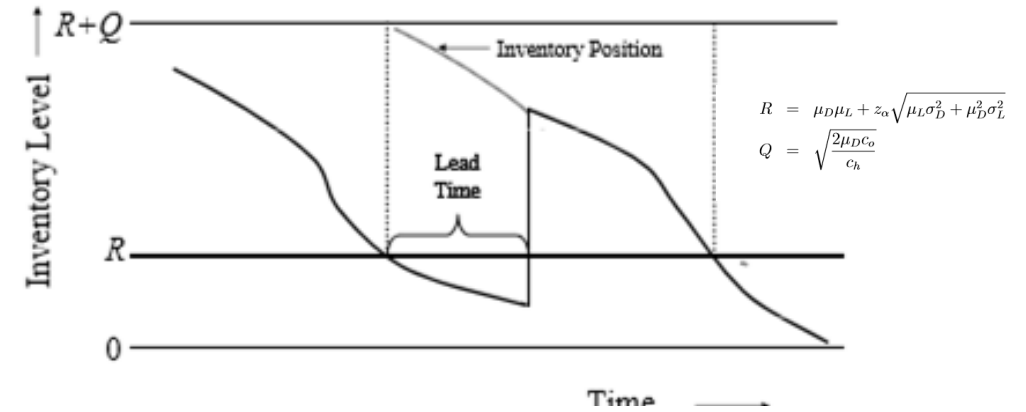
Replenishment Logic



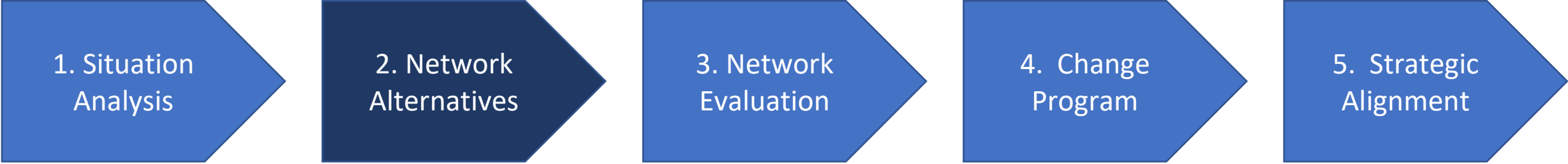
Safety Stock requirements



Inventory Planning Model



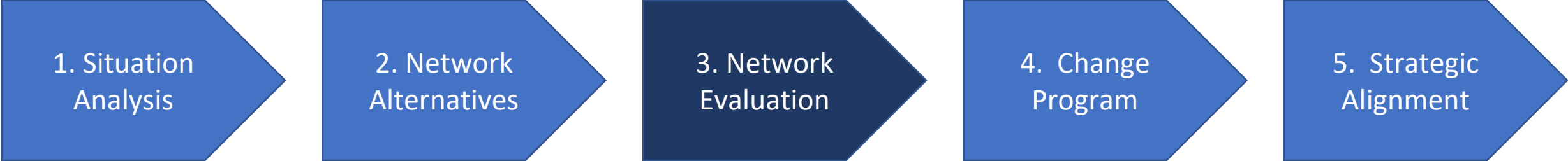
A five-stage approach to network design



The art of the possible – 5 years ++

- Inventory Holding Options
- Role of international logistics
- Role, Location, Sizing, and Cost of Distribution Centres and Branches
- Transport Delivery Laneways
- What would have to be true?

A five-stage approach to network design



Start to focus

- Cost based modelling comparison of network options where possible
- Model DC/branch size, labour and transport costs
- Service levels
- Process complexity
- Solution applicability to different divisions
- Technical complexity of change, Business impact of change
- Level of certainty of benefits capture
- Implementation cost

Start to focus

Alternative 1

Alternative 2

Alternative 3

Alternative 4

Alternative 5

Service Levels

Management Complexity

Macro Solution Risk

Alignment with Digital Future

Qualitative Evaluation

Alternative *n*

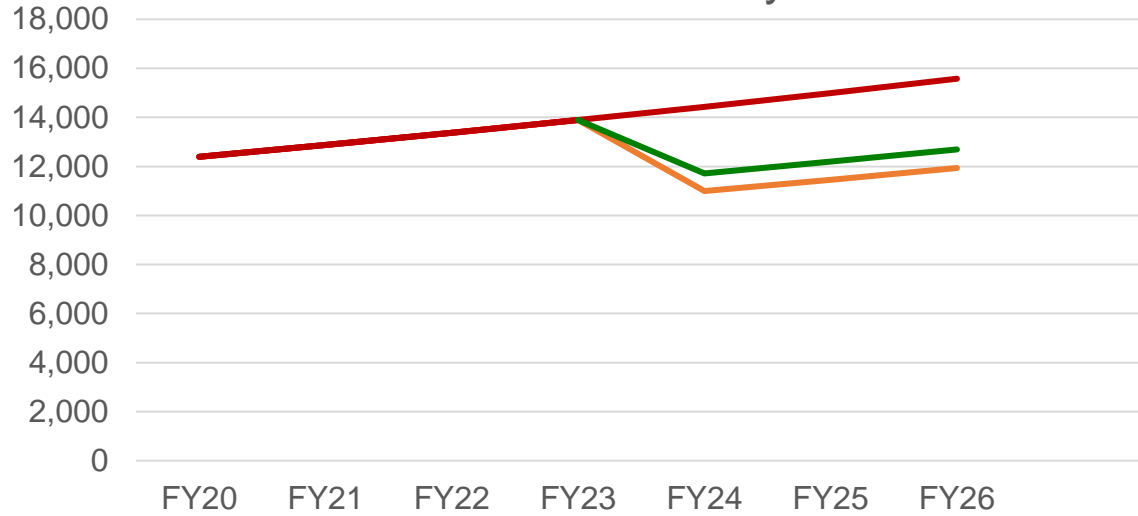
Alternative *n*

Alternative *n*

Quantitative Evaluation

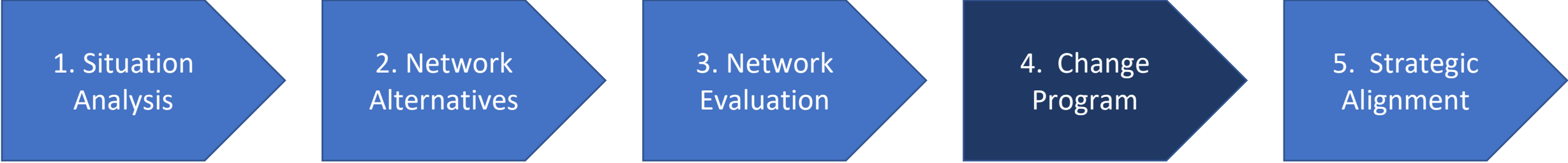
Start to focus

Network Costs Analysis



FY30 - Summary Opex Comparison	Option 0	Option 1	Option 2
Annual Tonne	1,000,000	1,000,000	1,000,000
Transport Cost - Inbound	500,000	250,000	750,000
Transport Cost - NDC to RDC	2,000,000	1,500,000	2,500,000
Transport Cost - NDC/RDC to Customer	1,000,000	1,000,000	1,500,000
DC Fixed Cost	5,000,000	3,000,000	2,000,000
DC Variable Cost	3,000,000	4,000,000	4,000,000
Supply Chain Overhead	1,000,000	1,200,000	1,000,000
Total Cost	12,500,000	10,950,000	11,750,000
Total Cost / Tonne	12.50	10.95	11.75
Ranking	3	1	2

A five-stage approach to network design

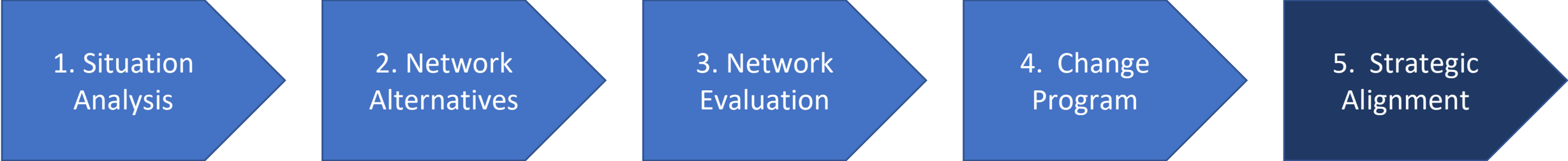


Preparing for delivery

- Capabilities Required
- Implementation Risk Analysis
- Implementation Roadmap
- Quick Wins



A five-stage approach to network design



Bringing it Together



**Overall Strategic
Case for Change**



Investment Case



**Network Design
and Key Decisions**



**Implementation
Roadmap
(including Quick
Win Program)**

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