



TRUE NORTH SOLUTIONS

LINKING YOU TO YOUR TRUE NORTH GOALS

Who We Are and How We can Help ?

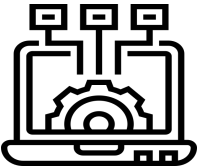


True North Solutions(TNS) is a **Solutions company** that brings its expertise to clients in **Management and Technology** with a group of **diverse and highly-skilled practitioners / Partners** across the globe.



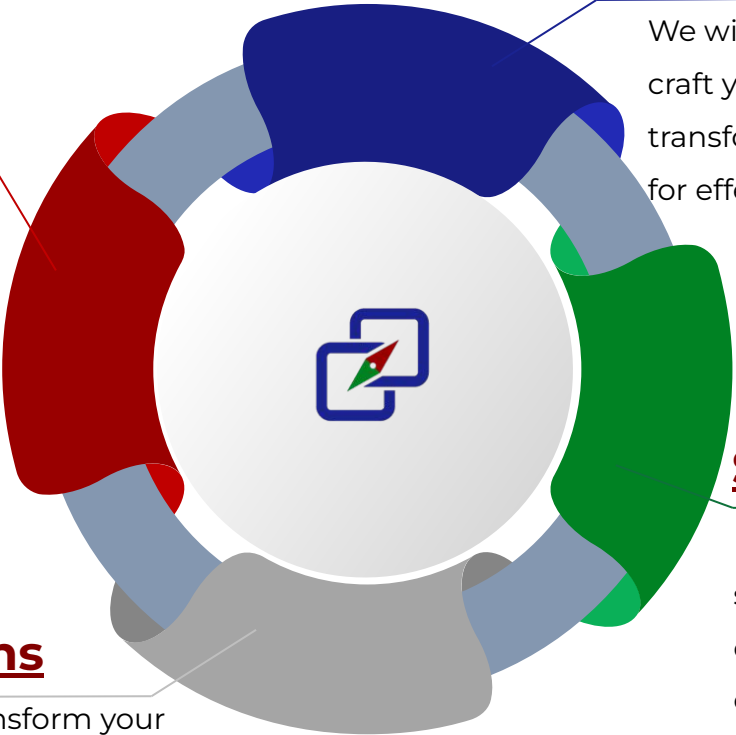
Support Solutions

We can support you with our tailored approach to your unique challenges in Engineering, Quality/Compliance and Training.



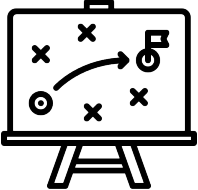
Technology Solutions

We offer solutions to digitally transform your business using AI/ML tools, ERP and process automation - all leading to improved business results.



Strategy & Lean Transformation Solutions

We will listen to your needs and help you craft your Vision, Strategy and a roadmap of transformation using the Lean principles for effective Change Management.



Supply Chain Solutions

End-to-End supply chain with both advance sourcing capabilities along with tactical focus on part management, risk reduction and cost optimization across global supply chains.



Strategy & Lean Transformation Solutions



1. ASSESS

We listen to your [needs/pain points](#) through interviews with leadership and the next level.

2. ALIGN

We work with your Leadership/the next level to create/establish clarity on Vision/Mission using the [Hoshin Kanri/A3 approach](#).

3. AWAKEN

Awareness sessions to the teams of the 'new' ways of working along with hands-on Lean Training/coaching

4. ACHIEVE

Help your teams 'in the trenches' to execute the A3 plans to achieve the desired results using [Kaizen methodologies](#).

5. AUGMENT

An ongoing journey to future-proof your organization through periodic review and sustenance processes established through a [culture of continuous improvement](#).

With our systematic Lean Approach, we can help align your teams to achieve your long-term goals and sustain the culture of Continuous improvement.

Supply Chain Solutions

Offered in
Partnership with



Stronger supplier collaboration in new product design

- [Advance sourcing\(Spec to Supplier\)](#)
- [VAVE](#)
- Component Analysis
- Specialized Engineering (Embedded, CAD, Teardown)
- BOM lifecycle assessment
- BOM - RFQ execution
- Costed BOM management



End to end supply chain risks & management

- Supply chain modelling
- Strategic supply base
- Supplier risk assessment
- Alternative sourcing
- M&A Due diligence
- Mitigation & recovery
- Parts availability search
- [Procure to Pay services](#)



Comprehensive commodity optimization

- Commodity consolidation
- Supplier value extraction
- Market impact & mitigation
- New supplier development
- Supplier data collection
- Escalation support
- Tail spend management



Localization & Product transfer support system

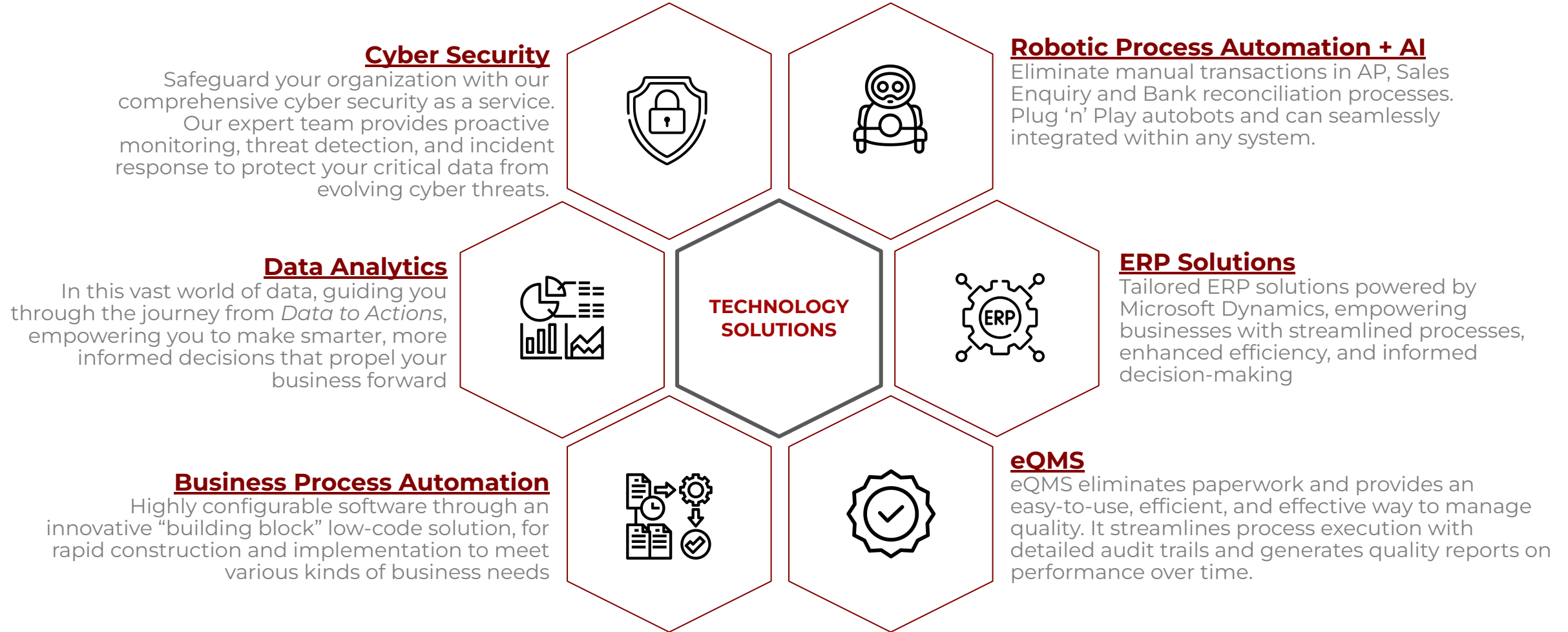
- Localized supply base
- Product transfer support
- Supplier Quality Audits and development (FDA)
- First Article Inspections



Digital ways of working and Industry 4.0

- Dashboards
- KPI Monitoring
- EDI enablement support
- Custom applications

We can help develop, optimize, maintain and mitigate risks in Global Supply Chains with our End-to-End Strategic approach coupled with Tactical execution.



We can help in digital transformation of your company to eliminate waste in your business processes with improved customer/employee satisfaction and margin improvements.

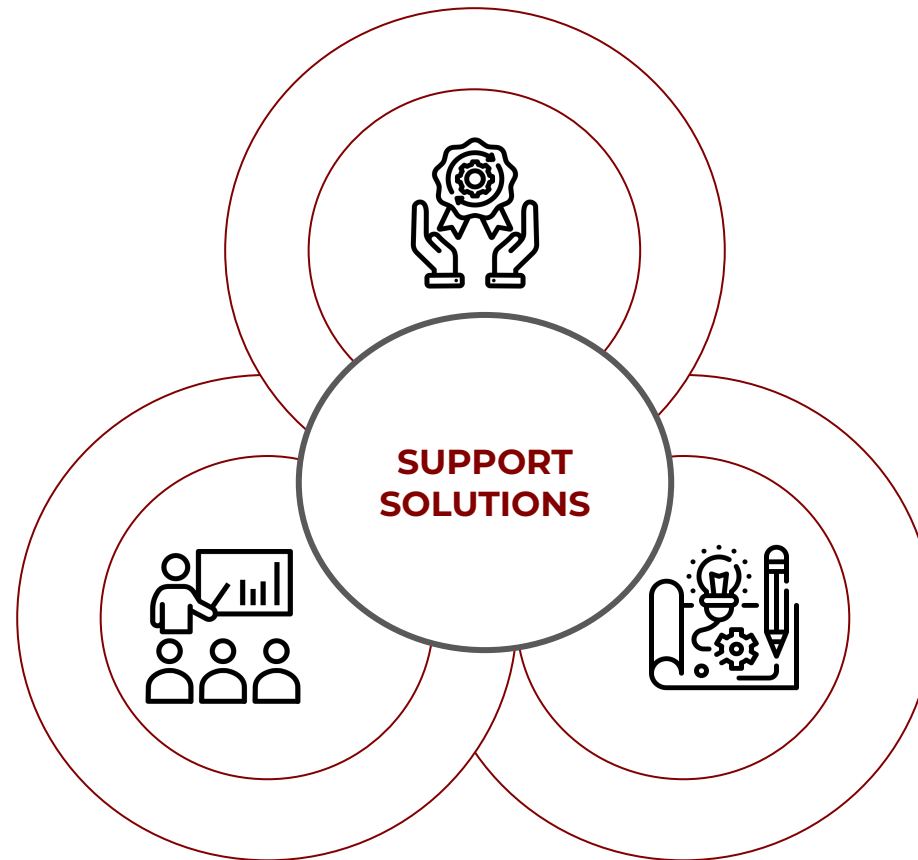


QMS Support

- QMS implementation
- Certification Support
- Supplier Quality
- Training on Quality Tools

Training Support

- Soft Skills
- Technical skills
- Leadership development
- Change Management
- Compliance
- LEAN & 6 Sigma Training & Certification



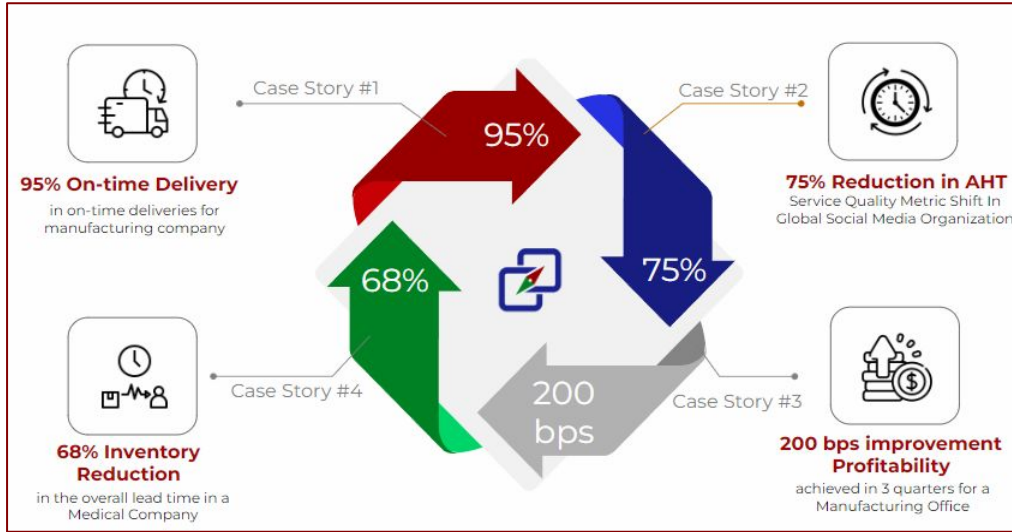
Engineering Support

- Hardware Engineering Support (ME/QE/TE)
- Engineering Program Management (Proto/DVT/ EVT)
- Jigs/Fixtures
- Design/Engineering
- Test Automation
- Process Control

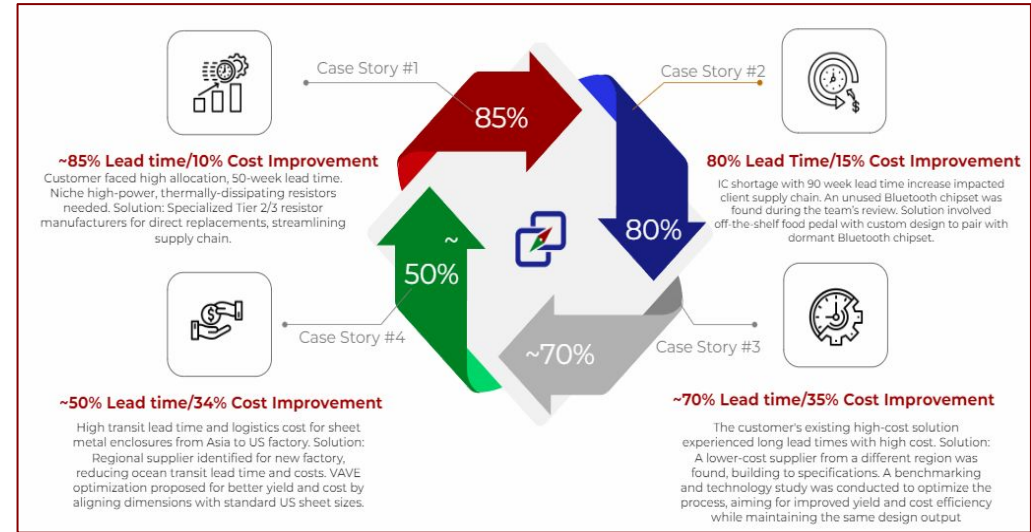
We provide support solutions to help your teams to focus on your core competencies related to product expertise while leveraging us for our expertise in specific areas across industries



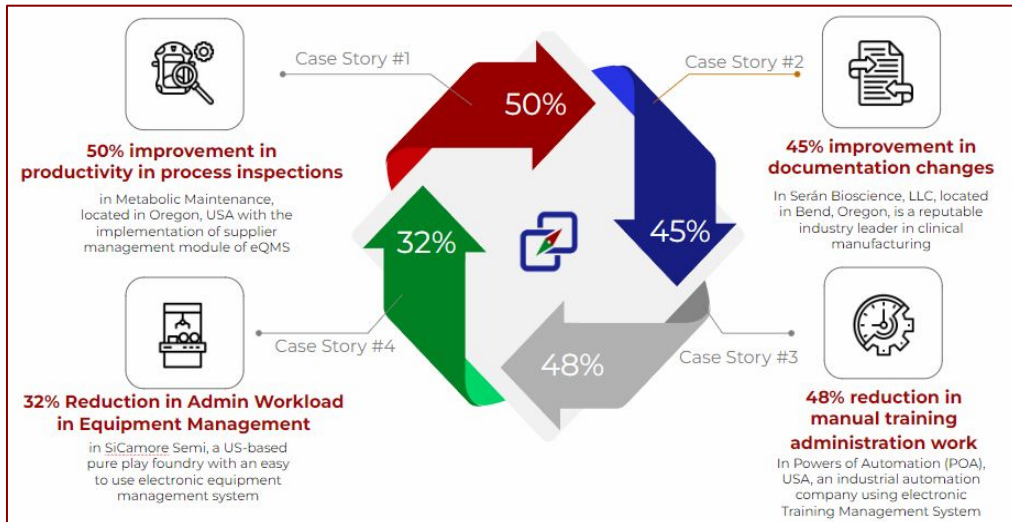
Strategy/Lean Transformation Solutions



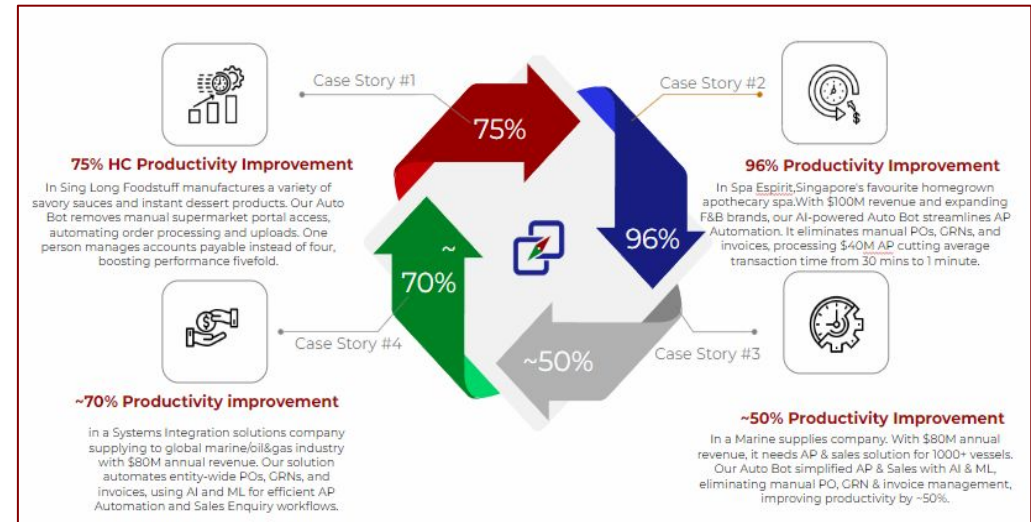
Supply Chain Solutions



eQMS Solution

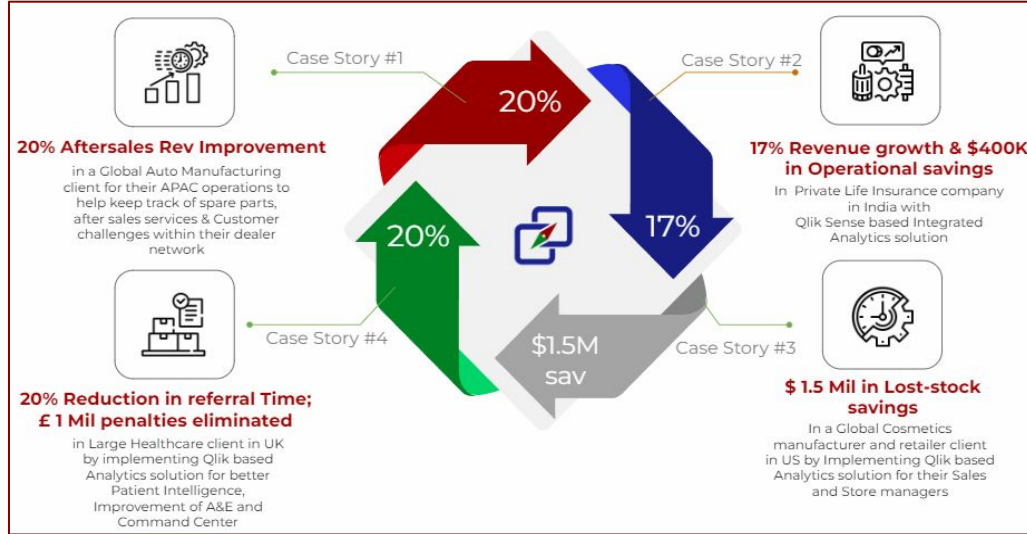


Robotic Process Automation + AI

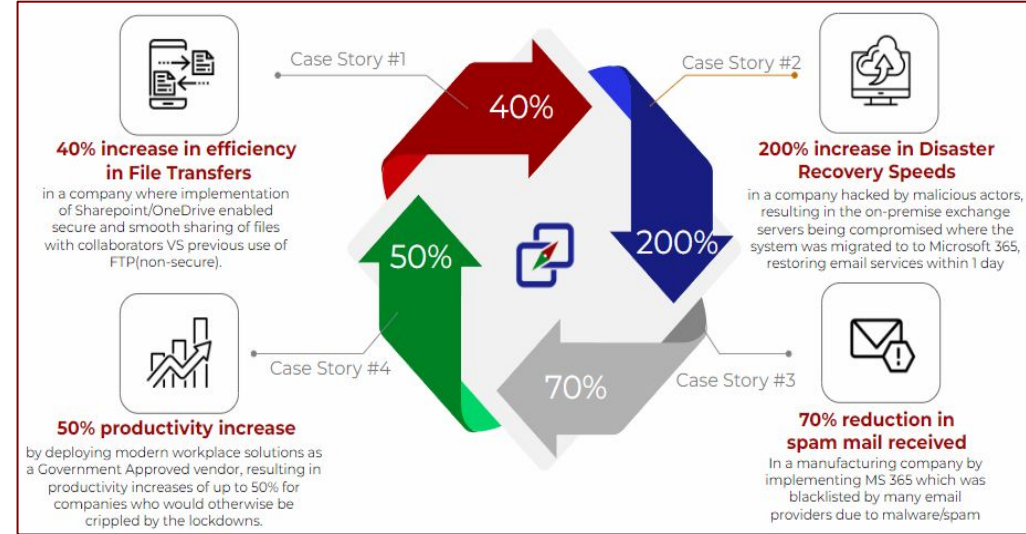




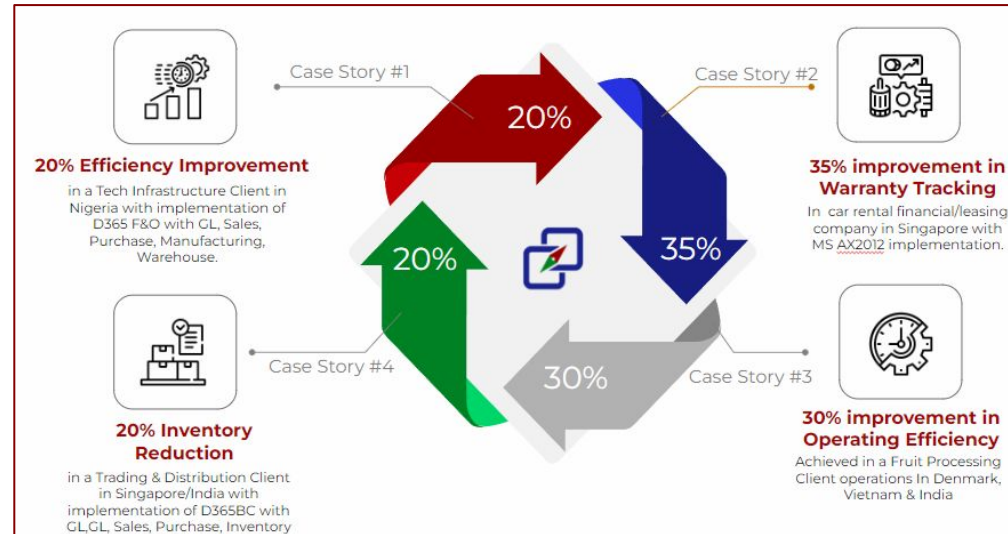
Data Analytics Solutions



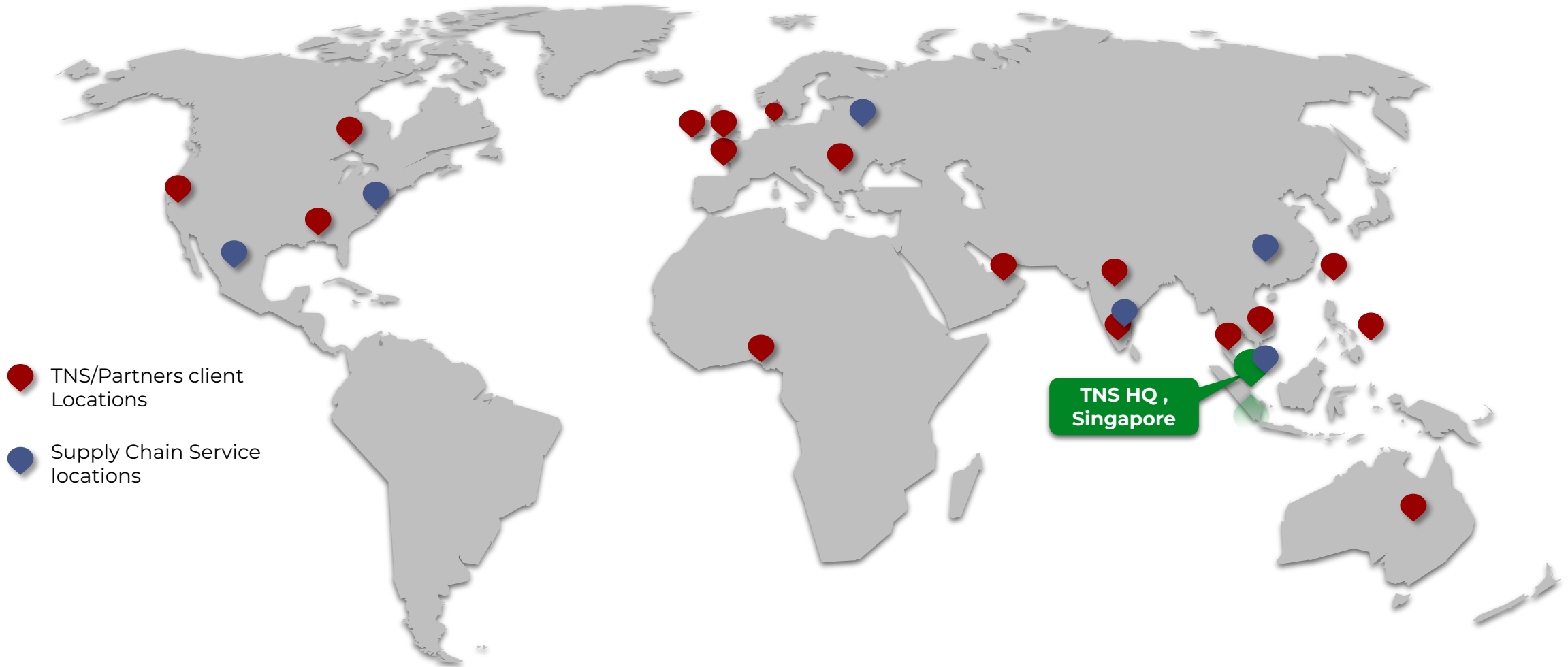
Cyber Security Solutions



ERP Solutions



TNS Global Presence



- Started in **2018**, We have optimised businesses across many sectors in **4** continents.
- **30+** highly skilled and seasoned consultants who led global operations before.
- Clients/Operations in **20+** countries and growing ...
- Offices in **3** countries and growing ...

What our clients say about us...



"TNS helped us
adapt, learn & ignite."
-Ori Dugary
Senior Director, Twitter



"They went over and
beyond to define
**a long term
structured roadmap.**"
-Parthi Paramsothy
Co founder, Gossamer Engineering



"They helped us
**come together stronger
as one team.**"
-Appa Rao
Chairman & MD, Centum Group India

The **results were stunning**
and the concepts continue
to be driven today."
-Andy Goodrow
CEO, Facet Medical Technologies



Our Clients



TNS Leadership



K. A. Umamaheswar



Strategy/Lean Transformation/Process/Supply Chain

Business Coach & A certified Lean expert and Six Sigma Black Belt. 25+ years of diverse and multi-cultural global industry experience in Leadership roles across India, Malaysia, Singapore and the USA



Manfred W



Business Process Automation/eQMS Solutions

Systems thinker/architect, can develop solutions that are easy to use and integrated with his 30+ years of extensive experience in life cycles for product development, supplier management and quality processes



Vinc Tan



Cybersecurity/IT Managed Services

A digital transformation/cybersecurity pioneer in Singapore with 27 years of experience in the Telco/IT industry. Provides innovative solutions and expert guidance to clients in these areas.



Sunil Aman



Data Analytics Solutions

Strategizing and Driving Growth for customers with Data Analytics Solutions. With 30+ years of experience, helping customers unearth new revenue growth opportunities and optimizing their costs and helping them make data driven decisions.



Majid Sairafi



Strategy/Global Supply Chain

With 40+ years' of global supply chain expertise, Majid brings immense experience to clients seeking supply chain solutions. Former VP at Flex, he led medical, auto sectors, driving transformative projects and turnarounds with a vast global team



Ashish Pandey



ERP Solutions

25 years of global work experience in innovating, automating and optimizing businesses through digital transformation using Global ERPs.



Samuel Ng



Robotic Process Automation

25 years of worldwide work experience in innovating and enhancing businesses with AI & ML. Samuel Ng served 15 years as COO for multiple ERP consulting firms, leading 100+ project implementations.



Saveen Hegde

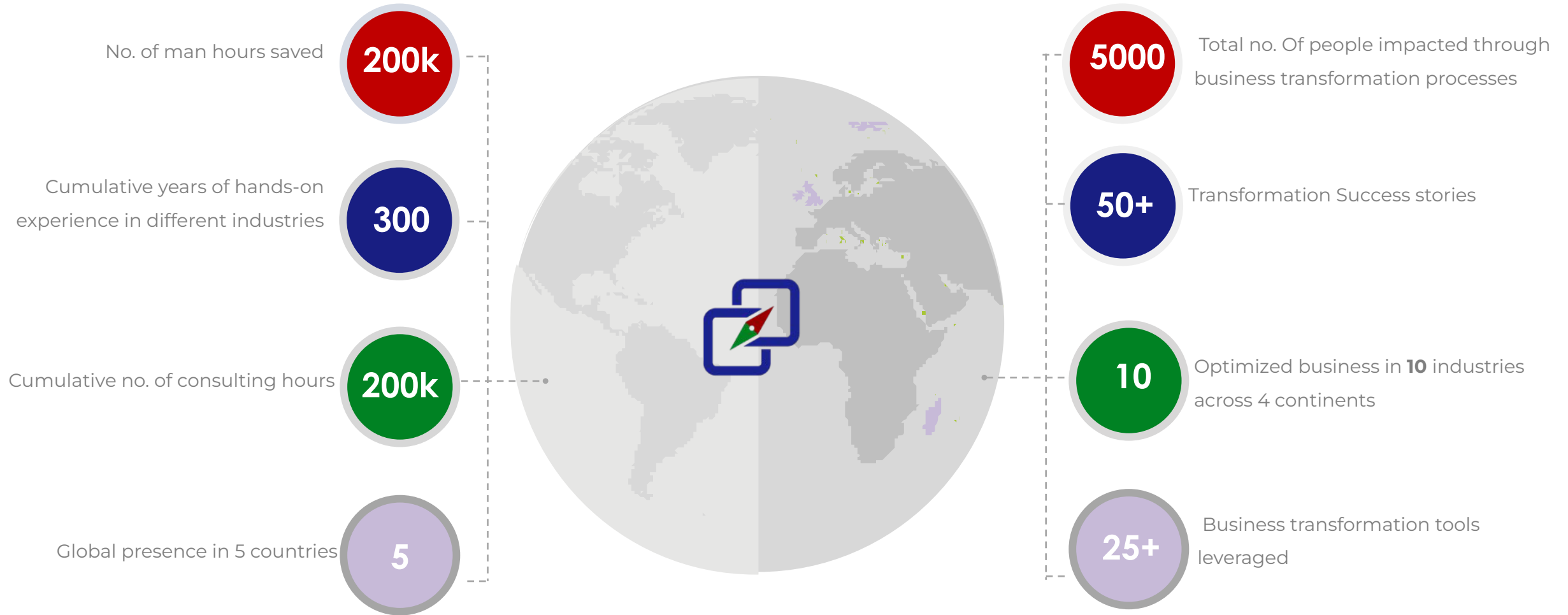


Leadership Training/Learning Solutions

A gamified simulation expert and an Award-Winning speaker with a unique ability to engage the audience, using tools of gamification. Over 10+ years of consulting with 70+ Fortune 500 organizations



TNS Global Impact





Unlock Value

Achieve Scale

with



TRUE NORTH SOLUTIONS
LINKING YOU TO YOUR TRUE NORTH GOALS



[Try us with a Scoping Engagement Today!](#)

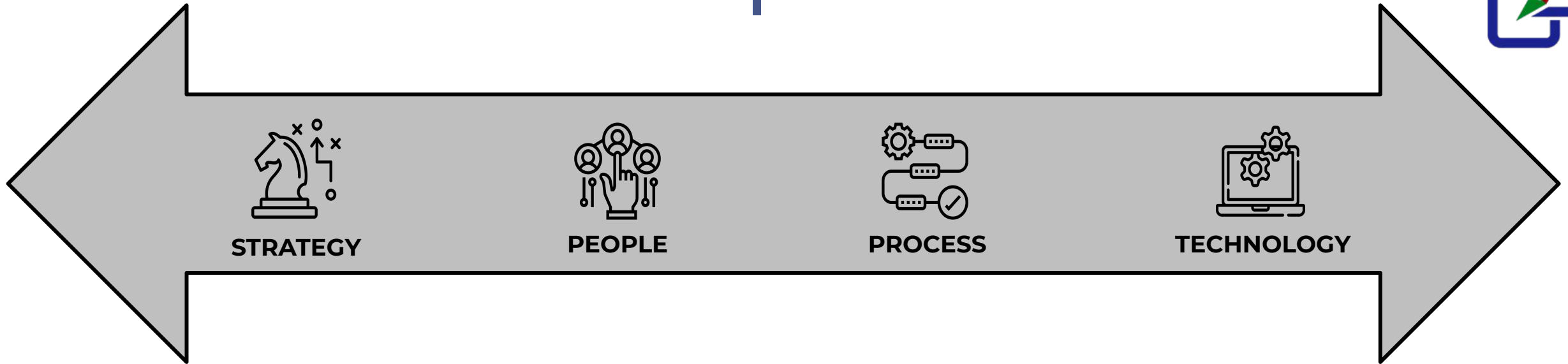


Appendix



Details on Strategy/Lean Transformation Solutions

Organization's Pain Points



STRATEGY

- Lack of clarity in long term goals.
- Difficulty in aligning teams/buy-in
- Lack of knowledge
- Lack of desire to improve

PEOPLE

- Lack of employee development/opportunities
- Lengthy HR Processes
- Inefficient performance management process
- Lack of diversity/inclusiveness

PROCESS

- Constant Fire-fighting
- No end-to-end Value stream approach to problem solving
- Lack of awareness in Operational excellence principles

TECHNOLOGY

- Manual time-consuming processes.
- Poor data accuracy
- Lack of real-time visibility to key metrics
- Multiple systems with little to no interconnectedness.

Pain Points

Business Impact

- Revenue growth ↓
- Margin ↓
- Net Promoter Score ↓
- ROIC ↓

- Employee Turnover ↑
- Offer-to-join ratio ↓
- Hiring Time ↑
- Employee Sat Score ↓

- Productivity ↓
- Defect Rates ↑
- Cost per Unit ↑
- Inventory Turns ↓

- Manpower availability ↓
- Cost due to errors ↑
- Opportunity costs ↑
- Customer Sat score ↓

Pain Points across the Value Stream

(Example)

Current State Value Stream
XYZ Manufacturing Co.

SUPPLIER MANAGEMENT

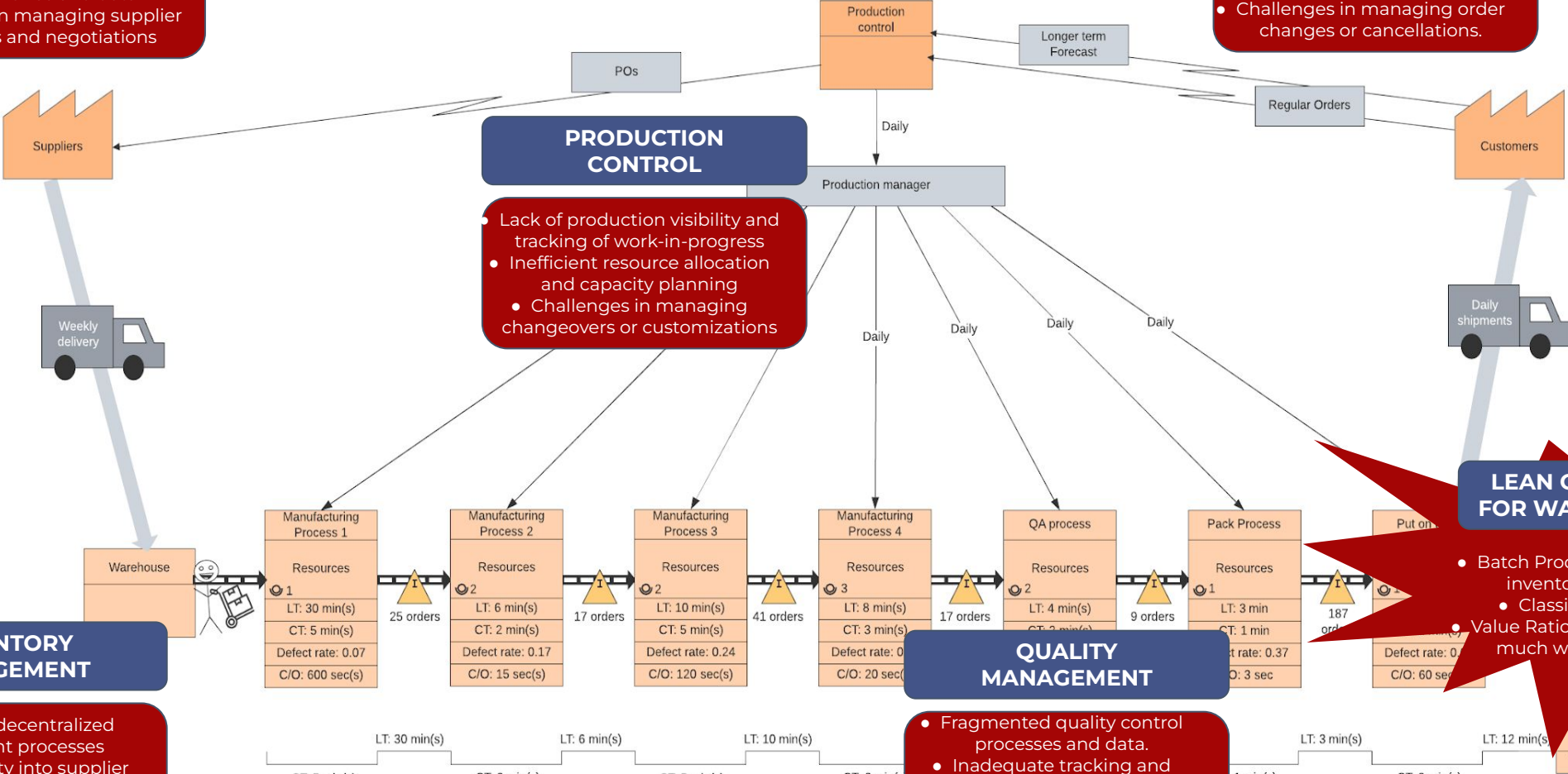
- Manual and decentralized procurement processes
- Limited visibility into supplier performance and data
- Difficulties in managing supplier contracts and negotiations

ORDER MANAGEMENT

- Manual order entry processes leading to errors and delays.
- Lack of visibility into order status and tracking
- Challenges in managing order changes or cancellations.

CUSTOMER RELATIONS MANAGEMENT

- Lack of centralized customer data and fragmented communication
- Inefficient lead management and tracking of sales activities.
- Limited visibility into customer interactions and sales performance



INVENTORY MANAGEMENT

- Manual and decentralized procurement processes
- Limited visibility into supplier performance and data
- Difficulties in managing supplier contracts and negotiations

QUALITY MANAGEMENT

- Fragmented quality control processes and data.
- Inadequate tracking and resolution of quality issues. Delays in identifying root causes and implementing corrective actions

LEAN OPPORTUNITIES FOR WASTE REDUCTION

- Batch Production System with inventory at every stage
- Classic 'Push System'
- Value Ratio of <30% showing too much waste in the system

Total lead time: 73 minutes
Total cycle time: 20 minutes

Strategy Solutions Slide

TNS Solutions across the Value Stream

(Example)

Future State Value Stream
XYZ Manufacturing Co.

SUPPLIER MANAGEMENT

- Manual and decentralized procurement processes
- Limited visibility into supplier performance and data
- Difficulties in managing supplier contracts and negotiations

ORDER MANAGEMENT

- Streamline order entry through automation and validation.
- Provide real-time order tracking for improved visibility.
- Enable efficient order modification and cancellation workflows.

CUSTOMER RELATIONS MANAGEMENT

- Implement a centralized CRM system for customer data / communication
- Enable efficient lead management, tracking, and sales activity monitoring
- Provide real-time visibility into customer interactions and sales performance

PRODUCTION CONTROL

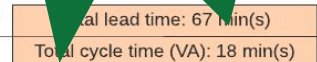
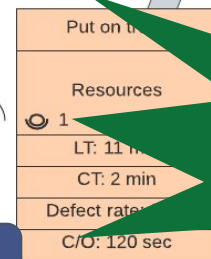
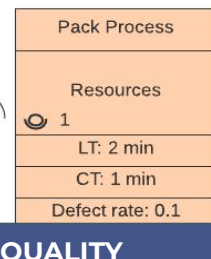
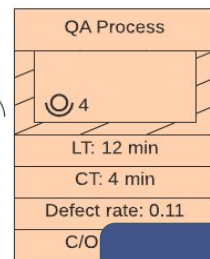
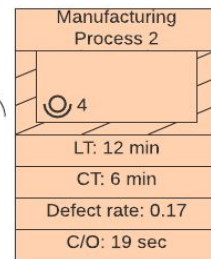
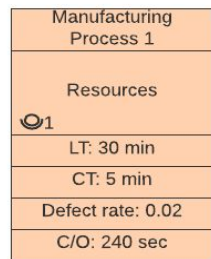
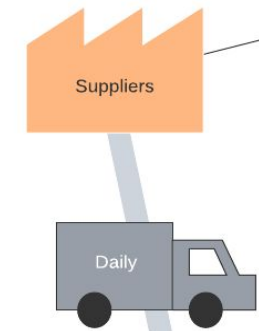
- Enable real-time production monitoring and visibility.
- Optimize resource allocation and capacity planning processes
- Streamline changeover processes and customization management.

QUALITY MANAGEMENT

- Implement centralized quality control processes and data tracking
- Improve non-conformance management and timely quality resolution
- Enable root cause analysis, implement corrective actions, and track their effectiveness

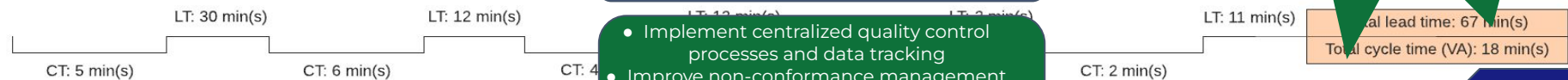
STREAMLINED LEAN OPERATIONS

- Pull System introduction
- Combined Manufacturing steps by eliminating Wasteful steps
- Reduced Overall Lead Time



INVENTORY MANAGEMENT

- Provide accurate real-time inventory visibility and tracking.
- Automate inventory counting and reconciliation processes
- Enable centralized inventory management across locations.



Strategy Solutions Slide

Hoshin Kanri Approach



1 A3 Policy-BU Head

CORPORATE GOALS

Scaling the Model in India Vision: **Creating value for global customers through reliable, highly-efficient & innovative**

- CSAT > 95%
- Annual Revenue: USD 90M
- EBIT > 25%
- ROCE > 18%
- Cash conversion cycle < 90 days
- Centum Brand enhancement & Employer of Choice

PESTLE SUMMARY

Significant opportunities with OEs: **Make in India** Policy booster to global manufacturing moving out of China for cost & trade reasons. Definite budget & **Local adaptation** in large. **Digitalization** & **Clean Energy** are mega-technology trends acting as a catalyst for growth in electronics globally.

High demand for talent in India. Govt loosening avenues for offset discharge incentives.

INDUSTRY ANALYSIS

India is a net importer of electronics goods (70% of demand), with the majority of India imported electronics coming from China. Indian B2B industry of US \$Bn in 2018 and growing at 15% CAGR.

Indian A&D electronics market predicted to be US\$150 billion by 2029-2030, of which ~US\$3 billion may be generated from electronics which are part of the portfolio to be processed. Growth in transportation segment in India & globally for electronics commodities.

Global competitive bidding to self-source 2020 (top) footprint responding to customer demand.

SWOT SUMMARY

S: World class facility, Talented Night team, Good cost, reputation, W: SCM (Maturity, Competitiveness), Inventory Mgmt, Affiliation

O: OEs: Moving production to India, US-China trade war, India demand growth for security, self defense

T: Increased Competition for talent, Wage Inflation, Component availability, Government offset rules

INDUSTRY BENCHMARKING

- Benchmarking with other industries/vertical industries
- Production line for Collaborative printing
- Zero Defect Program
- ESG and Sustainability best practices and create subject matter expertise(SMEs)
- Learning/Development & mentoring programs

2 REFLECTIONS

EMERGING SCENARIO

If it is a VUCA world out there, we need to constantly build/better competencies which reflects upon our organization to changing market dynamics. Quality, Delivery and Cost are looking for responsiveness to their needs. Long term competitiveness and production drive leads to user services from such companies. It is therefore imperative for a company like Centum to quickly establish the default condition of quality while strategize thinking long term to provide their clients with long term value.

Groups has grown by more than 2x in 3 years. Expectation for EMS to achieve this is next 3 years.

THEMES

Customer: Deliver reliability (OTD, OQC), identify high growth opportunities

Financials: Drive revenue growth with existing customer base new customers. Improve cost through material cost operational efficiency

People: Achieve the status of being an employer of choice through people development and fostering collaborative culture

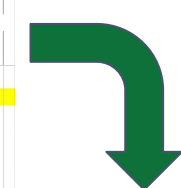
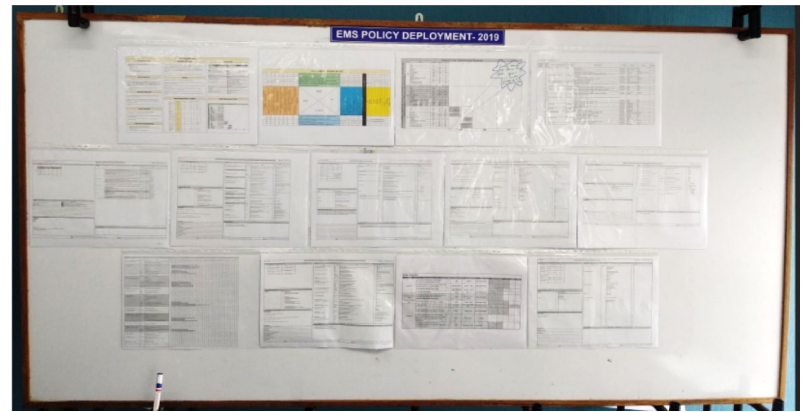
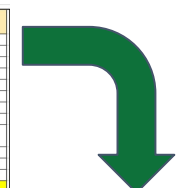
Process: Adapt processes to customer needs while minimizing manual intervention & effectively managing exceptions. Focus on scaling up quickly

Digitalization: Wrap on local initiatives and corporate automation & industry 4.0 best practices

Innovation: Offer value-added services to customers (Design services) and manage growth process solutions.

3 - YEAR HOSHIN X-MATRIX

	1	2	3	4	5	6	7	8	9	10	11	12
CSAT (5 point scale)	1	1	2	1	1	1	1	1	1	1	1	1
Revenue	1	1	1	1	1	1	1	1	1	1	1	1
EBIT %	1	1	1	1	1	1	1	1	1	1	1	1
OTD	2	2	1	1	1	1	1	1	1	1	1	1
Receivable Days	2	2	1	1	1	1	1	1	1	1	1	1
Payable Days	2	2	1	1	1	1	1	1	1	1	1	1
Product Quality (RMA ppm)	2	2	1	1	1	1	1	1	1	1	1	1
Material Cost	1	1	1	1	1	1	1	1	1	1	1	1
Manpower Cost/VA	1	1	1	1	1	1	1	1	1	1	1	1



4

3 - YEAR HOSHIN X-MATRIX

CSAT (5 point scale)

Revenue

EBIT %

OTD

Receivable Days

Payable Days

Product Quality (RMA ppm)

Material Cost

Manpower Cost/VA

Annual Objectives

- 1. Grow the EMS BU Business to \$200M by 2020
- 1. World Class Operations
- 1. Capture 30% of market
- 1. Employer of Choice

3 Year Objectives

- 1. Develop People
- 1. Operate Productively
- 1. Execute Reliably

Improvement Initiatives

- 1. Material Cost Reduction
- 1. Product Quality
- 1. Target Cost Reduction
- 1. Employee Attrition
- 1. Annual Growth

Strategic Initiatives

- 1. Energy Cost reduction (0.8 % of revenue)
- 1. Human being for the overall budget and drive the actions

2019 Reflection:

Customer response for the alternate locations

Costumer response for the alternate locations

Price stability

Forecasting changes due to cash flow issue

Change in production volumes

Short age/ delays due to rejection/ loss of components resulting in erosion of margin

Price fluctuation for commodity parts

Due to CTB contract production lead is not uniform

Manpower productivity is low due to manual activities / reports

2019 Strategy:

Customer cost reduction by getting approval for alternate supplier, working with Manpower cost / VA can be optimized by reducing the OEs, manpower and increasing the CA, productivity by stabilizing the work flow and automating production in machine and production consumables cost

Proposed Budget - Actual Spend

Proposed Completion - Actual Completion

Project Plan

Task: Identify the supplier for cost negotiation

1. Identify the supplier for cost negotiation

2. Define the metrics

3. Identification & Evaluation

4. Finalize the savings to target - >100K

1. Identification for suppliers for alternate development

2. Discussion and sign-off with customer

3. Sample development of parts

4. Sample Approval from customer

5. Alternate implementation

1. Discussion with Anwar & Arvind

2. Finalization & Agreement

1. Value engineering team formation

2. Creating the Procedures for the value engineering activities

3. Identify the alternate components @ P-D level

4. Trials & Approval from customer

5. Alternate implementation

1. High level improvement / Line balancing

2. Supporting function activity analysis and waste elimination

3. Linear production loading

4. Allocation of reports

5. Daily writing - labor efficiency

Product Life Ratio - Rumuna vs Singapore, Ratio - 70:30

Project Level P-D

Work flow optimization

Process Level P-D

1. State of Oeas recovery machine implementation

Site Name:

Schedule

AT	M	T	W	T	F	S	S
█	█	█	█	█	█	█	█

SL No.	Managing Points	Owner	UOM	Goal	MP Ref #	SL No.	Check Point	UOM	Goal	CP Ref #	Checkpoint Owner	Function	Priority	Must Have	Implem. relation	Impact to 3 year Goal	Morale	Total score
01.1	Achieve OTD / CSAT	%	%	%	E2019M P01	01.1.1.1	Capacity Enhancement	%	10%	E2019CP01	%	SCM	1	3	3	1	9	
						01.1.1.2	Reduce CTB Gap Vs OSo	%	10%	E2019CP02		1	9	3	9	9	2187	
						01.1.1.3	Zero CTB De Commit	No. of Week	0	E2019CP03		MPS	2	9	1	9	9	729
						01.1.1.5	Integrated Demand management - Deployment	# process in Green level	100%	E2019CP05		PM / Production Planning	1	9	3	9	9	2187
01.1	Achieve Quality - RMA PPM	PPM	%	%	E2019M P02	01.1.1.2.1	Zero Defect Drive for Product & Process - (massive proof of CTQs) - Tools (Jigs / Fixture Control Mechanism)	Non Availability	0	E2019CP11	CFE	1	9	3	9	9	2187	
						01.1.1.2.3	Eliminate / Improve Clean process (Water Soluble Chemistry)	No. of Defects / 2000 PPM	E2019CP13	Product	3	9	1	9	9	729		
01.1	NPI Turnaround => 8 months	Months	%	%	E2019M P03	01.1.2.1.1	ECN Process Enhancement		0	E2019CP15	Product	9	9	3	9	2187		
						01.1.2.1.2	Fast Track NPI Material Procurement	No. of Days	8 - 10 weeks	E2019CP16	CFE	1	9	3	9	9	2187	
F1.1.1	Revenue in FY 2019-20	USD	%	%	E2019M P04	01.1.2.1.4	Enhance Test Development and Qualification Process	RTPty	2%	E2019CP17	Testing	3	3	3	3	9	243	
						F1.1.1.1.1	Integrated Demand management - Deployment	# process in Green level	100%	E2019CP05	PM	9	3	9	9	2187		
						F1.1.1.1.2	CTB should be 98% for 4 weeks rolling	%	10%	E2019CP18	SCM	1	9	3	9	9	2187	
						F1.1.1.1.6	Establish standardized quote engine for manufacturing Supply Chain, Cash flow forecast - FY current & new			E2019CP22	PM	2	9	3	9	9	2187	

How can TNS help?

Kaizen Methodology



Establish Baselines

- Understanding the client needs
- Value Stream Mapping / Process Mapping & Analysis
- Metrics Baselineing
- Kaizen Roadmap/Calendar

Setup Kaizen Promotion Office (KPO)

- Help identify Lean talent
- Setup KPO with focus on:
 - Lean certifications
 - Gemba walks
 - Employee engagement activities
 - Playbook creation: Suggestion schemes, Quality Circles, Best practices proliferation

Establish Performance Management Process

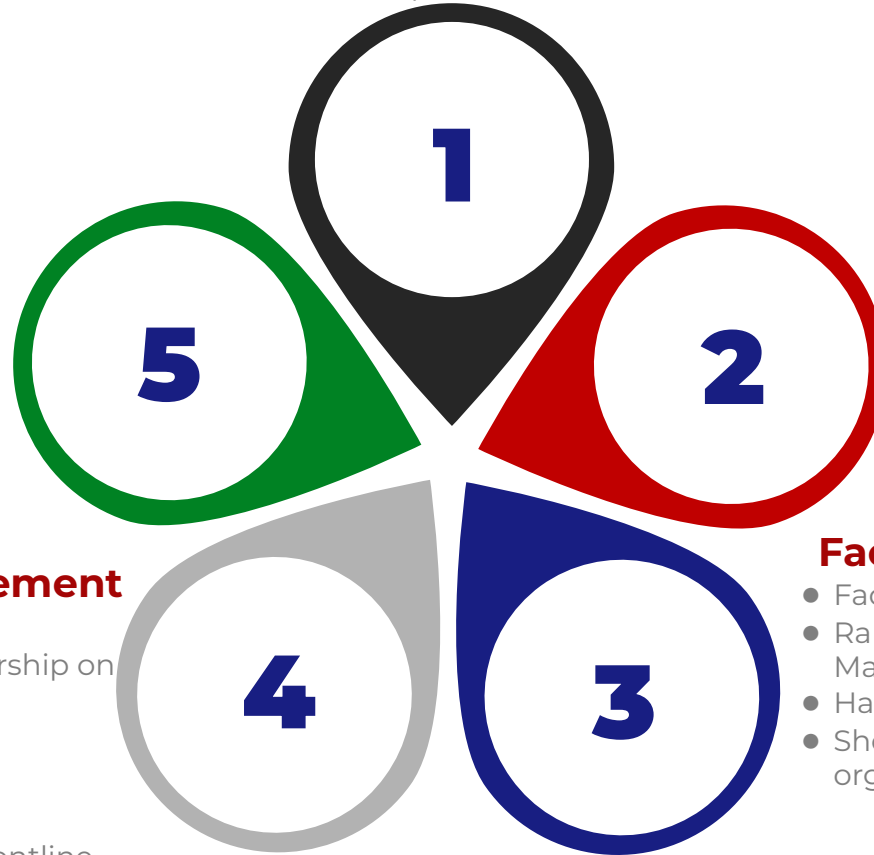
- Periodic performance review with Leadership on
 - Lean Maturity progress
 - People engagement
 - Business KPIs
 - Best practice proliferation
- Financial impact with Kaizen projects
- Tiered Visual Management System for frontline workforce to manage operational KPIs

Create Alignment / Awareness

- Communication with the CFT teams on the Kaizen focus areas
- Alignment: Buy-in & Setting Expectations for Kaizen
- Classroom Lean Basics Training

Facilitate Kaizen Workshops/Projects

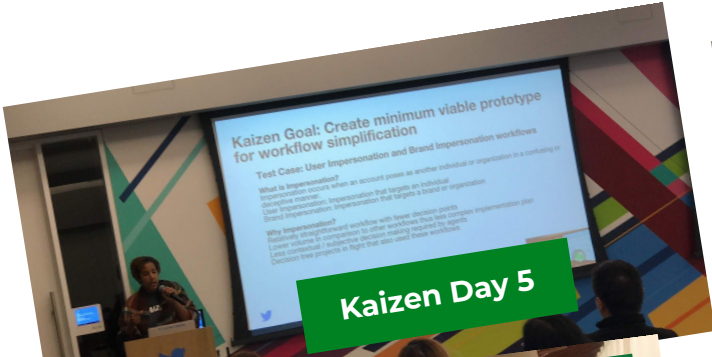
- Facilitating the Kaizen Workshops/projects
- Rapid improvements with Visual Management/Standard Work creation
- Hands-on Exposure for teams
- Showcase Best practices to the rest of the organization



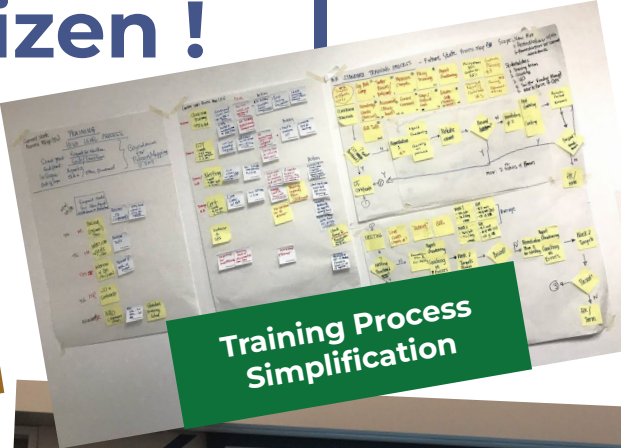
Strategy Solutions Slide

We can help you rally teams, train your employees in Lean Practices and facilitate Kaizen workshops for Business results and a sustainable Culture of Continuous Improvement.

The Power of Kaizen!



Kaizen Day 5



Training Process Simplification



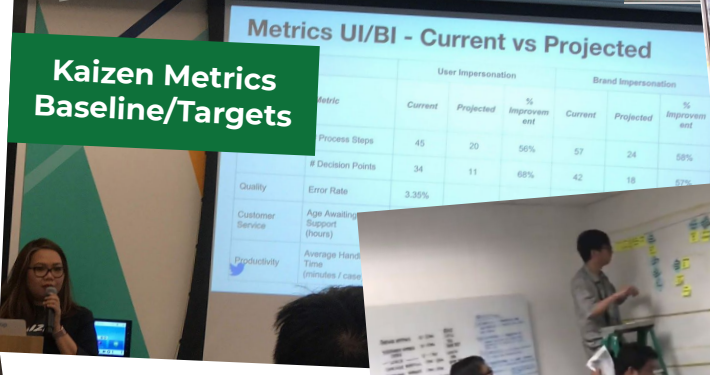
Supplier Process Simplification



Before



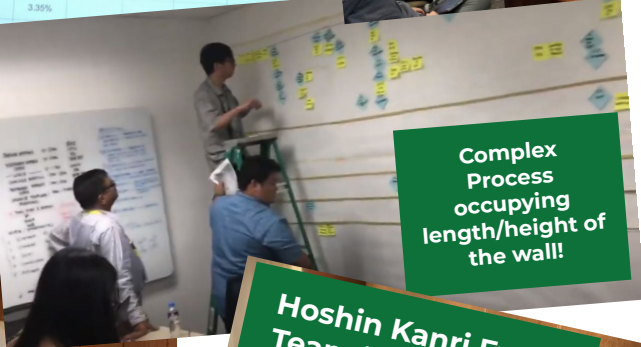
Hoshin Kanri Event Team Building



Kaizen Metrics Baseline/Targets



After



Complex Process occupying length/height of the wall!



Lean Training Session



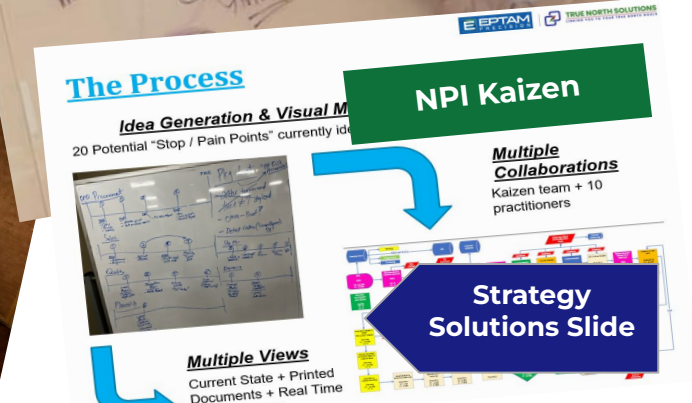
Sales Strategy Session



Team Accomplishment!

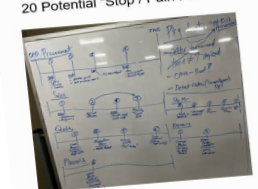


Hoshin Kanri Event Team in A3 session



The Process

Idea Generation & Visual M



Multiple Views

Current State + Printed Documents + Real Time Tracking

NPI Kaizen

Multiple Collaborations
Kaizen team + 10 practitioners

Strategy Solutions Slide

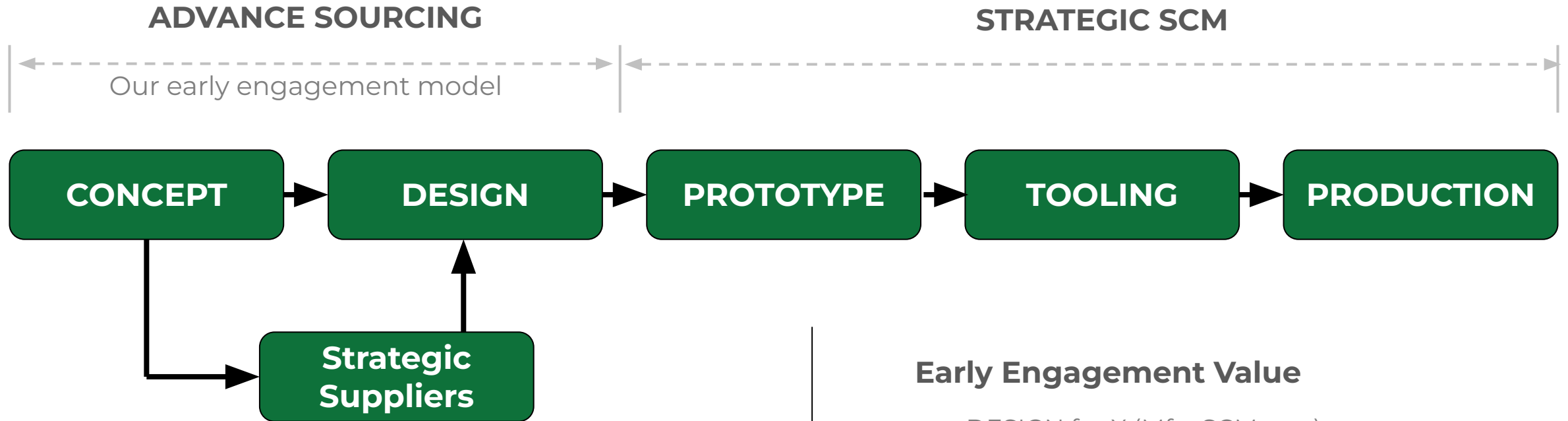


**Strategy
Solutions Slide**



Details on Supply Chain Solutions

Advance Sourcing as a Service

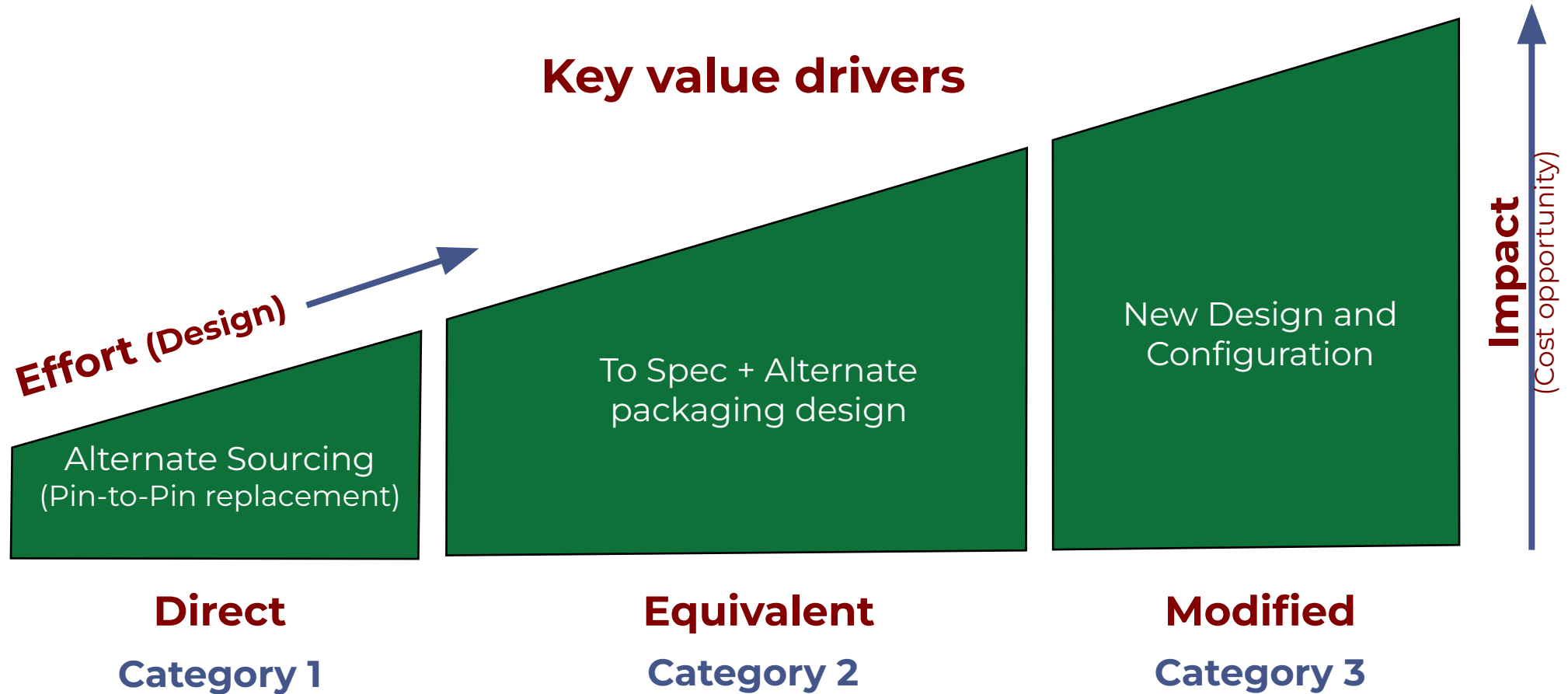


Our techno-business support teams collaborates with design engineers as early as in the concept stage. We help drive from the “Spec to Supplier”.

Early Engagement Value

- DESIGN for X (Mfg, SCM, etc.)
- SUPPLIER competitiveness
- MITIGATES project risk
- OPTIMIZE costs

Advance Sourcing – Alternatives @ Design



Techno-Commercial team in place for Spec-to-Spec comparison and FFF recommendations

Procure to Pay as a Service



Order Management

- Customer purchase order reviews
- Order processing – SO confirmation to customer
- Shipment delivery support - tracking # to delivery drop follow ups
- Payment outstanding follow ups
- Customer feedback support - Purchase / Sales Order / Delivery
- Demand analysis and sales forecasting
- Inventory stocking analysis and preparation
- Production planning support to factory
- Liaison between marketing and operations

Master Data Management

- Request for quote and data collection
- Item master set-up in ERP for supplier / Manufacturer
- System accuracy (Item master data) and clean up support
- Supplier payment terms preliminary negotiations
- Metric reports to stake holders – creation, distribution

Planning & Procurement Execution

- PO execution based on ERP demand (creation to release of POs)
- Supplier PO confirmations
- Supplier shipment follow-ups based on PO commits
- Clearing past-due POs - Review and resolve for shipment
- Logistics support - shipment resolutions with vendors
- Warehouse support – Receiving challenges
- Payables resolution – supplier issues raised, if any
- Return material processing – warranty/ damage / scrap management
- Purchase order - supplier reviews and reschedule actions
- Shortage gap analysis and follow up – Supplier escalations
- Shortage management - explore Open market offers and alternatives
- Metric report reviews for open issue actions – procurement related

**Strategy
Solutions Slide**



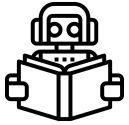
Details on Technology Solutions

How can TNS/The Directional help?

Technology - Robotic Process Automation + AI



FEATURES



Auto read of email attachment



Documents processing: Excel, PDF, JPG, Word and many other formats



Pre-defined workflow based on different scenario



Document editing: Excel

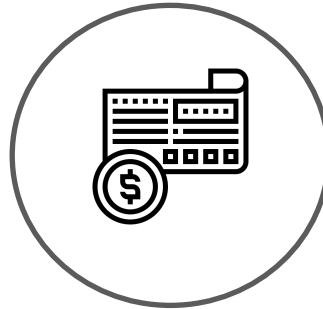


Approval process of document before submitting to ERP



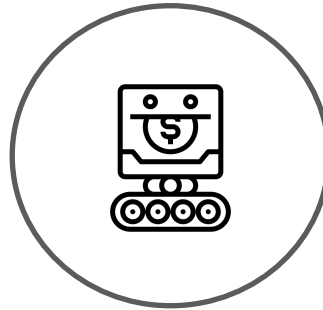
Data exchange to interchange data with different systems

APPLICATIONS



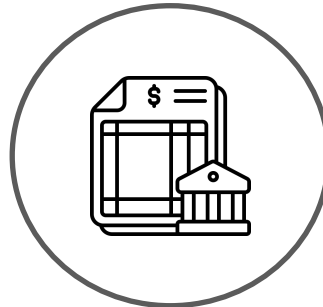
ACCOUNTS PAYABLES AUTOMATION

Accounts Payable Automation, also known as AP Automation, is the process by which accounts payable processes are handled digitally rather than manually. Accounts Payable Automation has transformed the way companies process and pay their invoices. With AP Automation, businesses can automatically receive, approve, and pay their invoices through a single platform.



SALES AUTOMATION

Sales are a vital fundamental part of all businesses, regardless of size or industry. Operational activities like data entry, invoice preparation and delivery can be repetitive and monotonous. By automating these processes, it can also help improve accuracy and speed up your sales process much faster than if done manually.



BANK RECONCILIATION

Many businesses have trouble reconciling their accounts, and it can be a tedious and frustrating process. Our Auto Bot can help you to identify any discrepancies between your records and the bank's, making the matching process much more easier and faster.

Technology Solutions Slide

With the help of AUTOBOTS, we can help you reduce repetitive manual tasks for better customer/employee satisfaction and improved margins.

How can TNS/EMinds help?


Technology - MS Dynamics ERP



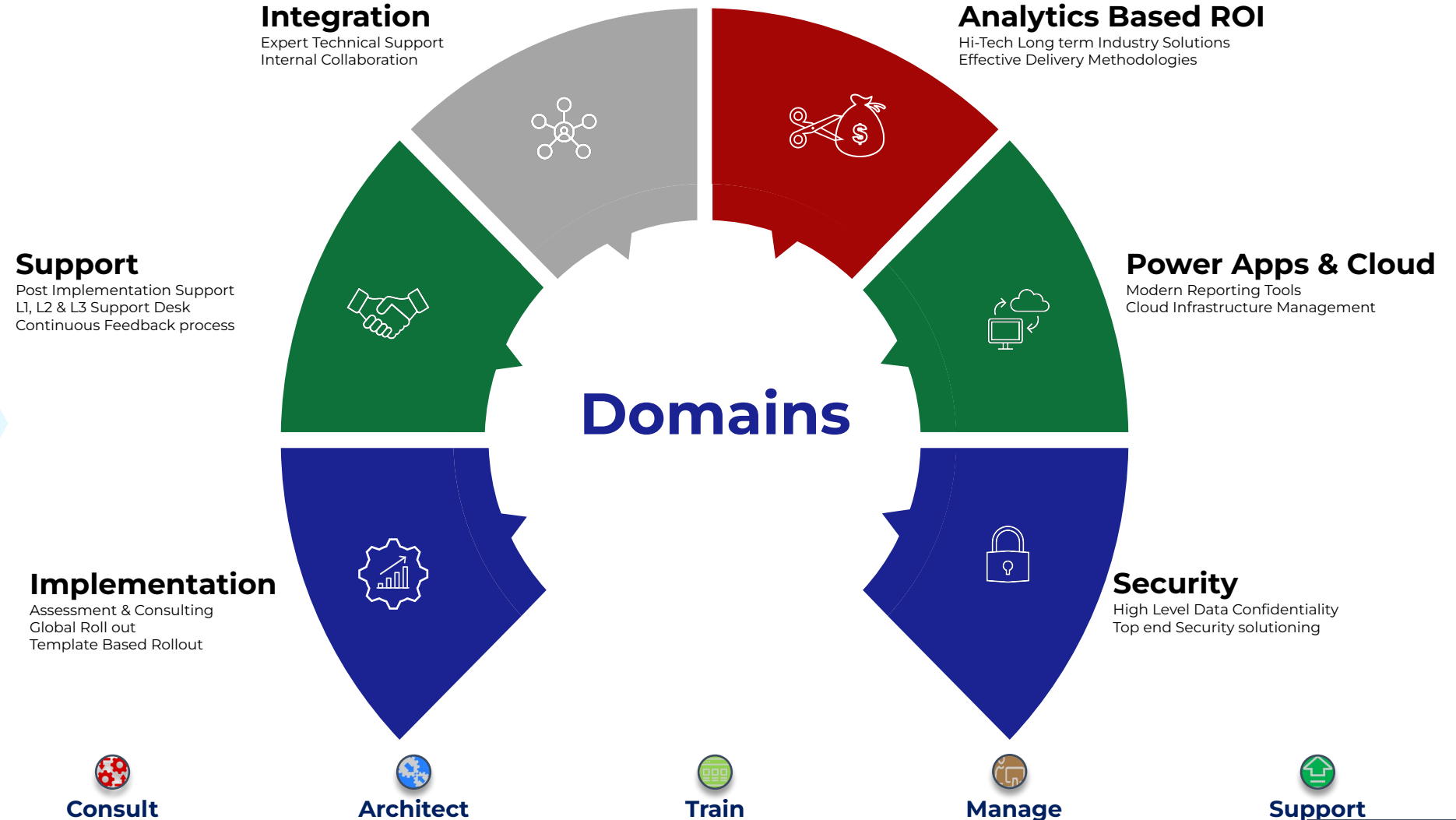
MICROSOFT PRODUCTS' ECO-SYSTEM

 Azure

 Microsoft 365

 Dynamics 365

1. Commerce & Retail
2. Customer Engagement (CE)
3. Business Central (BC)
4. Power Apps
5. Finance & Operations (F&O)
6. AI Co-Pilot

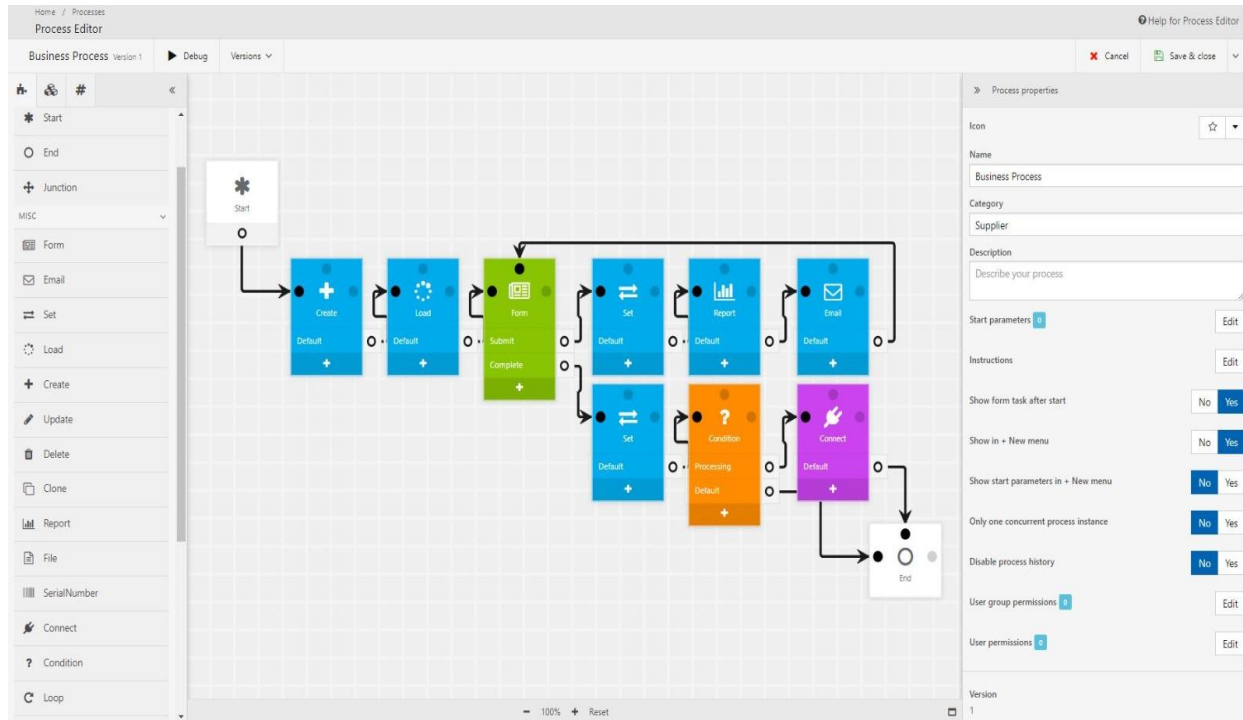


How can TNS/Novunex help?

Technology - Business Process Automation



The Novunex Platform is a **process automation tool** that allows you to create and manage processes through an intuitive interface easily. With a **simple drag-and-drop UI** and powerful features, you can **build custom processes** or connect to popular data sources to **automate repetitive tasks** quickly.



Low-code Solution

Low-code solution that lets you get started in minutes. Build your business apps faster with drag & drop editors, which allows you to add fully functional components without writing any code! Save time and money with a powerful development platform accessible online.



In-process debugging and editing

Allows users to edit and debug processes while it is being processed in an integrated environment. The built-in debugger can be used without making any changes to the process design, allowing for on-the-fly debugging.



Deploy/Maintain different process versions

Removes the dependency on a particular development environment at runtime. It can deploy and maintain different process versions and adapt them to varying environments with just one click.



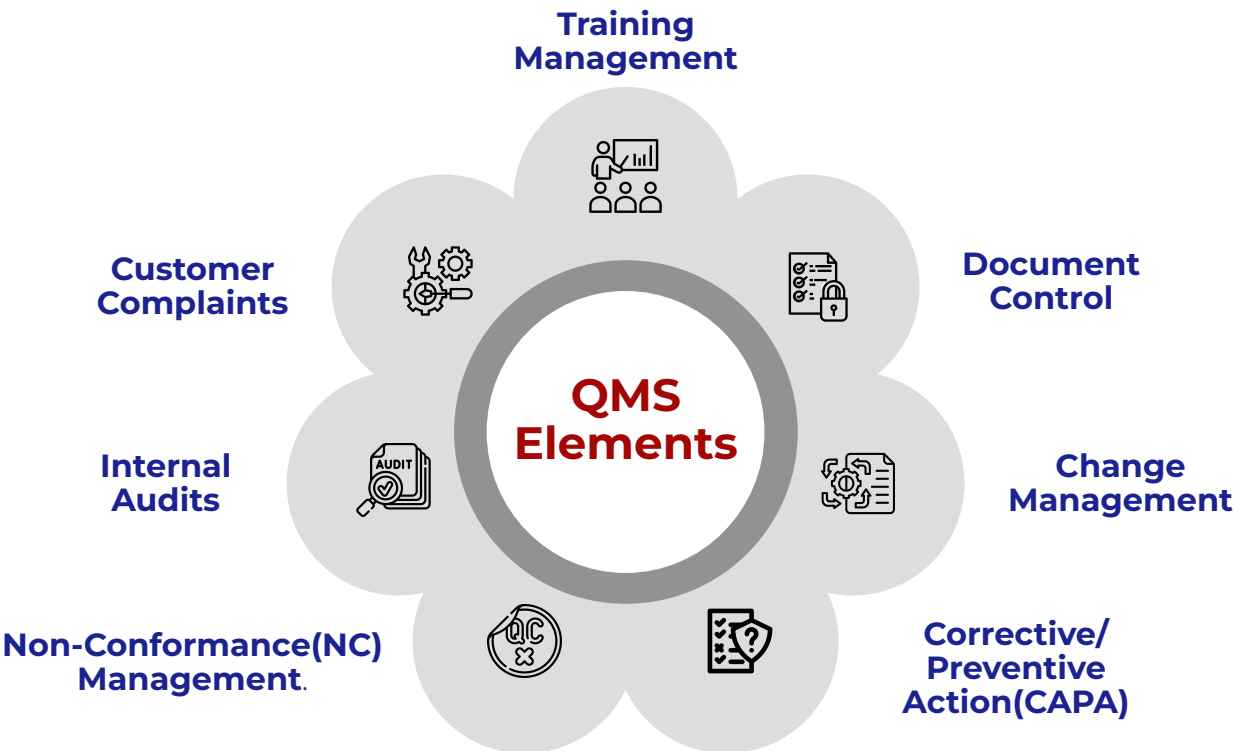
Create Compliant process deployments

Lets you quickly implement application packages ready for validation, ensuring your users' apps comply with regulatory requirements when they hit production.

How can TNS/Novunex help?

Technology – Novunex eQMS

eQMS(ISO9001 and Medical Devices) **eliminates your paperwork** and provide an **easy-to-use, efficient, and effective way** to manage quality. It streamlines the process of executing processes with **detailed audit trails** and generating **quality reports** on performance over time.



Connected



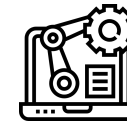
Manage your QMS by using a broad set of cloud-based connected modules(over 60+). All information is in one place, from the requirements to realization and delivery to meet regulatory compliance(Single Source of Truth)

Customizable



Can be customized and be scaled to suit client's unique business and regulatory requirements.

Automated



Fully automated software solution that helps to run and maintain your QMS with ease of use. Always audit-ready.

Compliant



Avoid error-prone manual tasks and any risks with compliance issues caused by human errors. Also, protected with latest encryption and security protocols

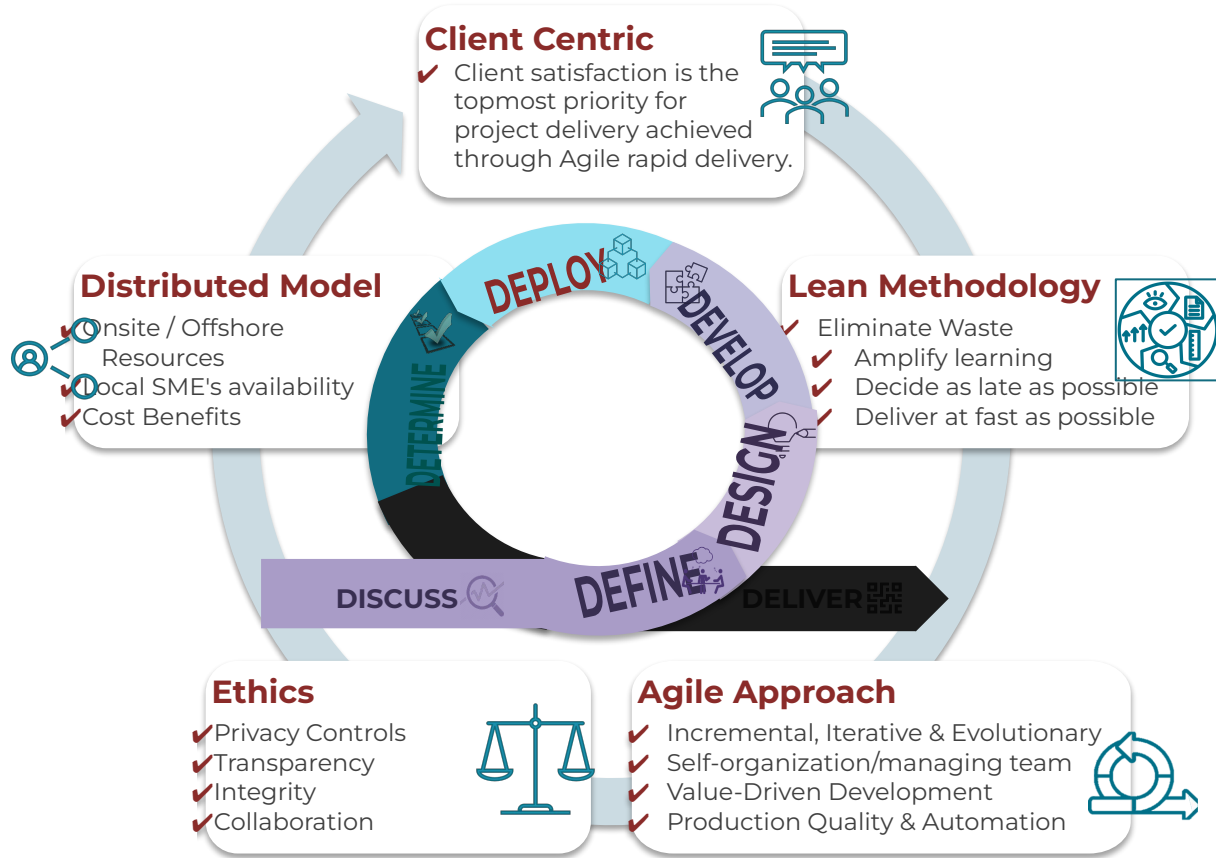
of successful implementations : >50
of manhours saved : ~700K hours
of industries served: 8 industries
of successful external audits/FDA inspections: >100+

How can TNS/Amolution help?

Technology – Data Analytics



In today's fast-paced and interconnected world, making informed decisions is crucial for businesses to thrive and stay ahead of the competition. Experts in harnessing the power of data to unlock valuable insights that drive strategic growth and help businesses make smarter, more informed choices.



Augmented Analytics & Auto ML

Harness AI to assist with all aspects of your analytics journey, enabling more people to reach their full potential with data. Across the complete analytics life-cycle, take advantage of AI-generated analyses and insights, natural language interaction, and predictive analytics powered by automated machine learning.



Visualization and Dashboards

Best-in-class visualization and discovery experience is backed by the unmatched speed and flexibility of analytics engine. We offers the best dashboards on the market, with full interactivity and support for guided discovery, free-form exploration and search.



Embedded Analytics

Go beyond the dashboard and put analytics at the point of decision. With a complete set of open APIs, you can embed analytics in operational apps as well as create mashups and external applications. Put analytics insights where immediate action can be taken.



Alerting & Automated Actions

Built to drive action based on changing data, intelligent data alerting informs users of any sudden changes or outliers in your data to prompt timely action. Trigger event-driven actions through a visual, low-code environment without human intervention

How can TNS/VGC help?

Technology - Cyber Security Solutions



We provide end-to-end cybersecurity solutions, On-premise and On-cloud.

On-Premise: Firewall devices: Cisco Meraki, Fortinet, SonicWall, Sophos

On-Cloud Solutions: Microsoft Cybersecurity Solutions

Cyber Security Solutions



**Identity and Access (Zero Trust)
Secure Laptops and Mobile Devices
Real Time protection of Emails and Apps
Deploy Corporate Policies
Integrated Threat Protection (SIEM/XDR)**

>600 SMEs

Completed Projects

**Implementation and Configuration
Managed Security Operations**

>30 NPOs

Completed Projects

Helpdesk Support

**Cyber Awareness
Training**

>1000 SMEs & NPOs

Completed Microsoft
Teams/OneDrive Training

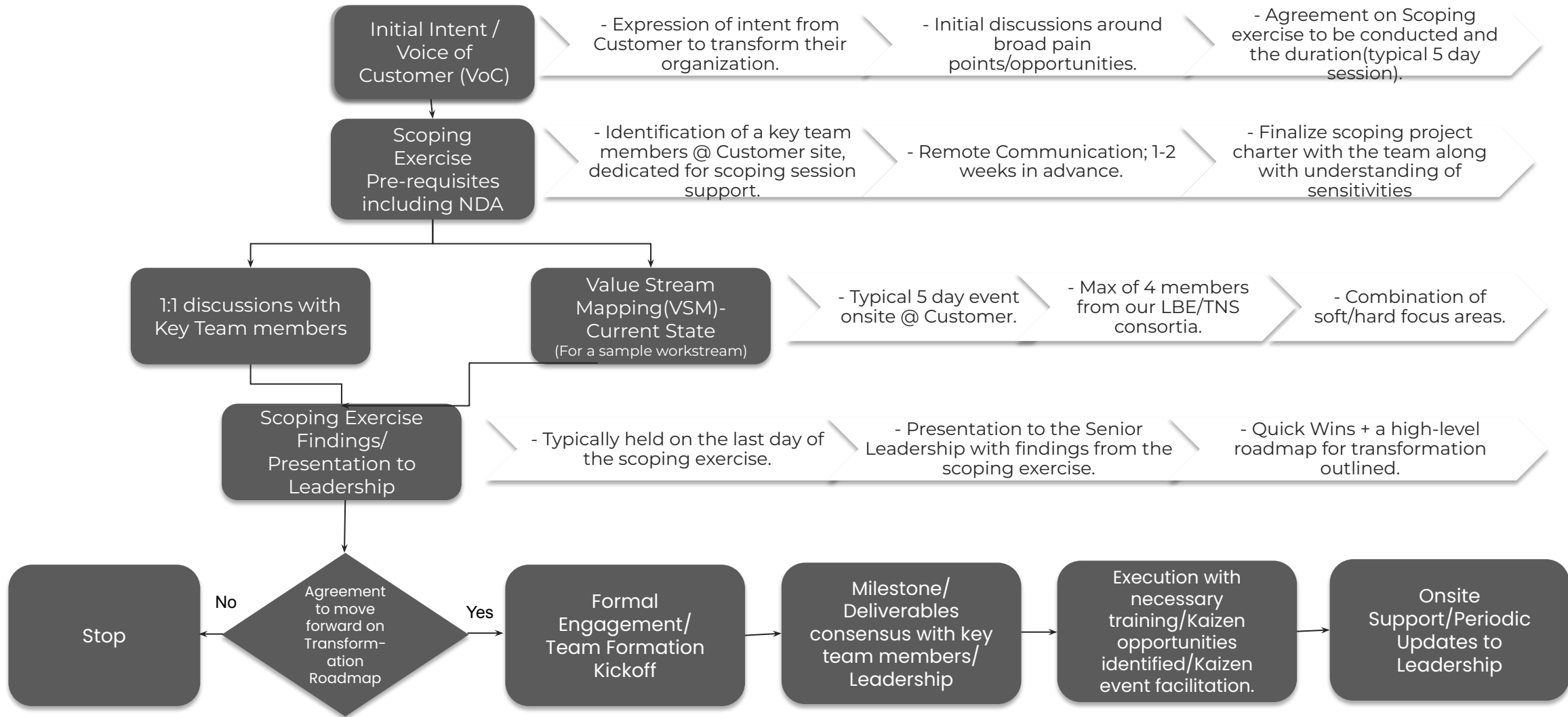
**Technology
Solutions Slide**



Our SCOPING Approach

Our approach towards scoping is based on a blended approach using the 5A framework as the backbone while enhancing the approach using experienced consultants and proven and tested industry scoping methodology

Scoping Exercise-High Level Flow

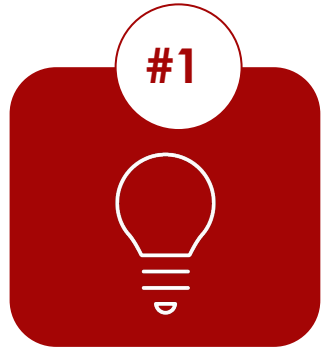


Scoping with Our Client

An INR 400-crore Electronics
Manufacturing Company building
state-of-the-art technology products for
aerospace/ defense/ infrastructure/
medical customers

Scoping Approach

4 Day On Site Activities



**Voice Of
Customer:
Understanding
the Intent**



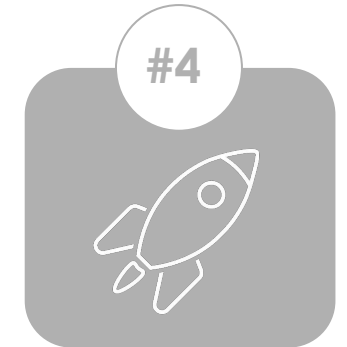
**1-1 Discussions with
Key Team Members**



**Value Stream
Mapping Current
State**



**Findings/
Presentation**

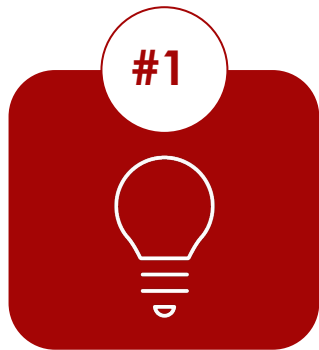


**Decision to deploy
the next stages of
the plan**

Closing Slide

Stage #1

Voice Of Customer: Understanding the Intent



We had discussions with leadership (CEO) to understand the problems that are being faced by the site and what are the key areas that need improvement

Voice of Customer (VoC)

XYZ Co. initiated discussions with True North Solutions on 15 Dec'18 to seek ways to improve the following:

1. Processes/Systems

Lack of robust set of standard processes/systems in Program management function leading to non-availability of accurate information as needed for effective and timely decisions.

2. Customer Satisfaction scores

Customer satisfaction scores are low across 4 main customers: AA, BB, YY, ZZ mainly due to missed delivery of products (OTD hovering at ~55-60% across these customers). The main reason as indicated by XYZ Co. is material availability.

3. Organization structure

The XYZ Co. leadership feels that the organization would need a revamp to ensure better alignment of its people towards common objectives. One issue highlighted was the many program leads reporting to the Sales GM (after iterative re-orgs) and lack of leadership to 'own' and drive solutions quickly.

4. Automation

XYZ Co. leadership feels that there are 'too many people' in Program & Supply chain functions and that there is an opportunity for automating several tasks in Program management function that would help in improving productivity and also achieving repeatable processes. It could be inline with the ERP system implementation that is underway (Infor LN) scheduled to go LIVE end Mar'19. Ideal solution could be to leverage this ERP system and/or integrate it with the automated solutions.

5. Sourcing effectiveness

XYZ Co. leadership is not happy with the effectiveness of sourcing processes to generate best-in-class pricing and lead time from suppliers. This is an area that they are seeking strategic ways to improve as well.



Stage #2a

1-1 Discussions with Key Team Members



We conducted targeted discussions with key members within the organization to understand the problems. We walked the shop floor and back office processes

The laptop screen shows a presentation slide. At the top, it reads "Process Issues: Sample Process Mapping of Order-to-Commit process". Below this is a handwritten process map with various stages like "Customer", "PM", "Material Planning", "Purchasing", and "Production Planning". The main content of the slide is titled "Process Issues: Key takeaways: Sample Process Mapping of Order-to-Commit process". It lists several areas for improvement:

- CFT level actions needs to be tracked & driven for effectiveness.
- Rules need to be provided for exception management (CFT level)
- Only exceptions outside of rules needs to be brought to management attention
- Data driven discussions based on automated reports
- Automation opportunities
 - EDI feed from customer
 - Webportal automation - enable minimum touches to demand normalisation based on customer terms
 - EDI portal: Supplier vs XYZ Co.
 - MDS input information & output for MRP loading
 - CTB linearity tracker

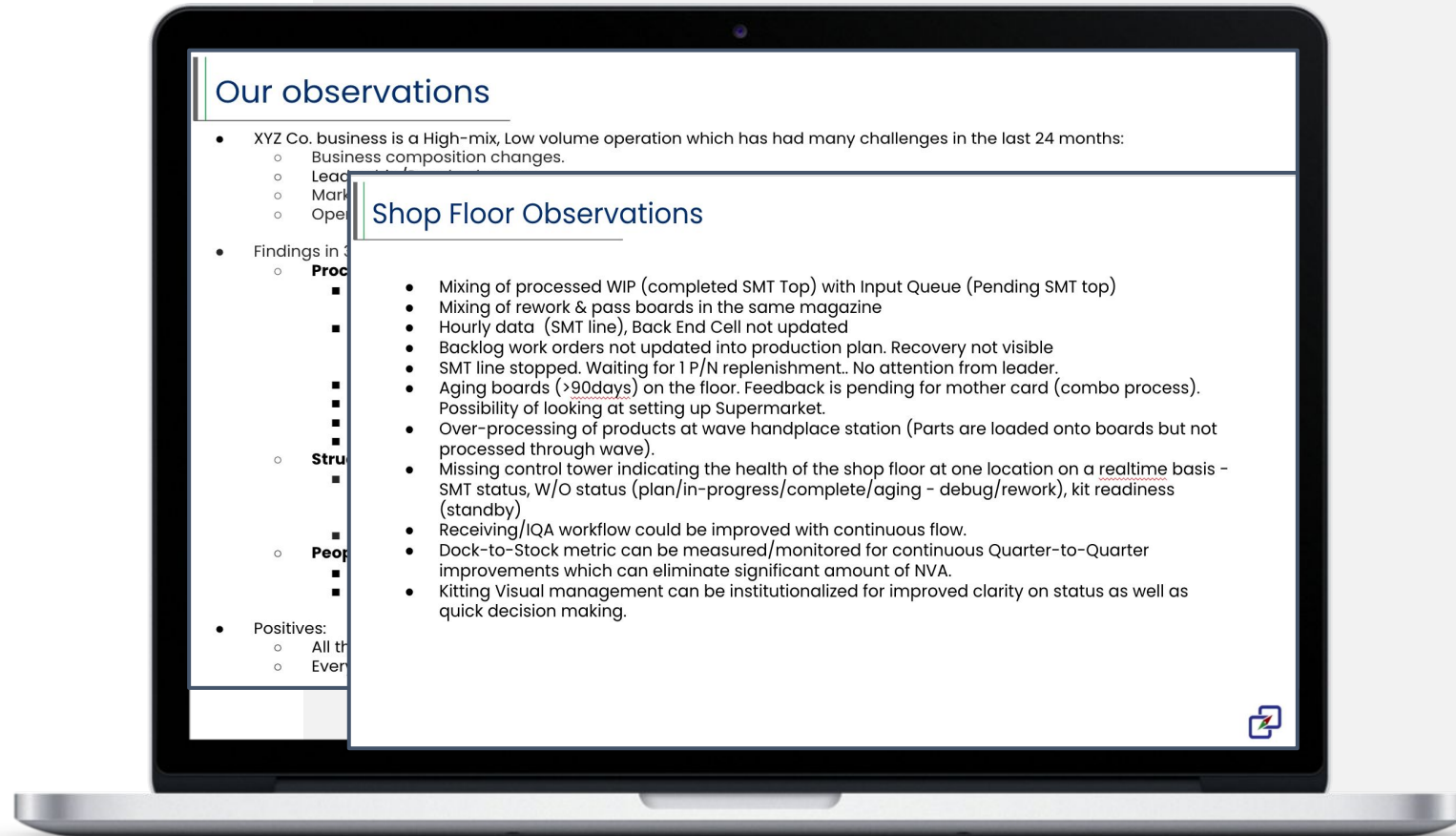
At the bottom, a note states: "Note: Estimate up to 60% improvement in LT for Order to Commit Process with the above activities implemented".

Stage #2b

Value Stream Mapping Current State



We mapped the Current State Value Stream for critical processes to understand what was really driving the problems within the processes/organization



Stage #3

Findings/ Presentation



Our findings encompassed:

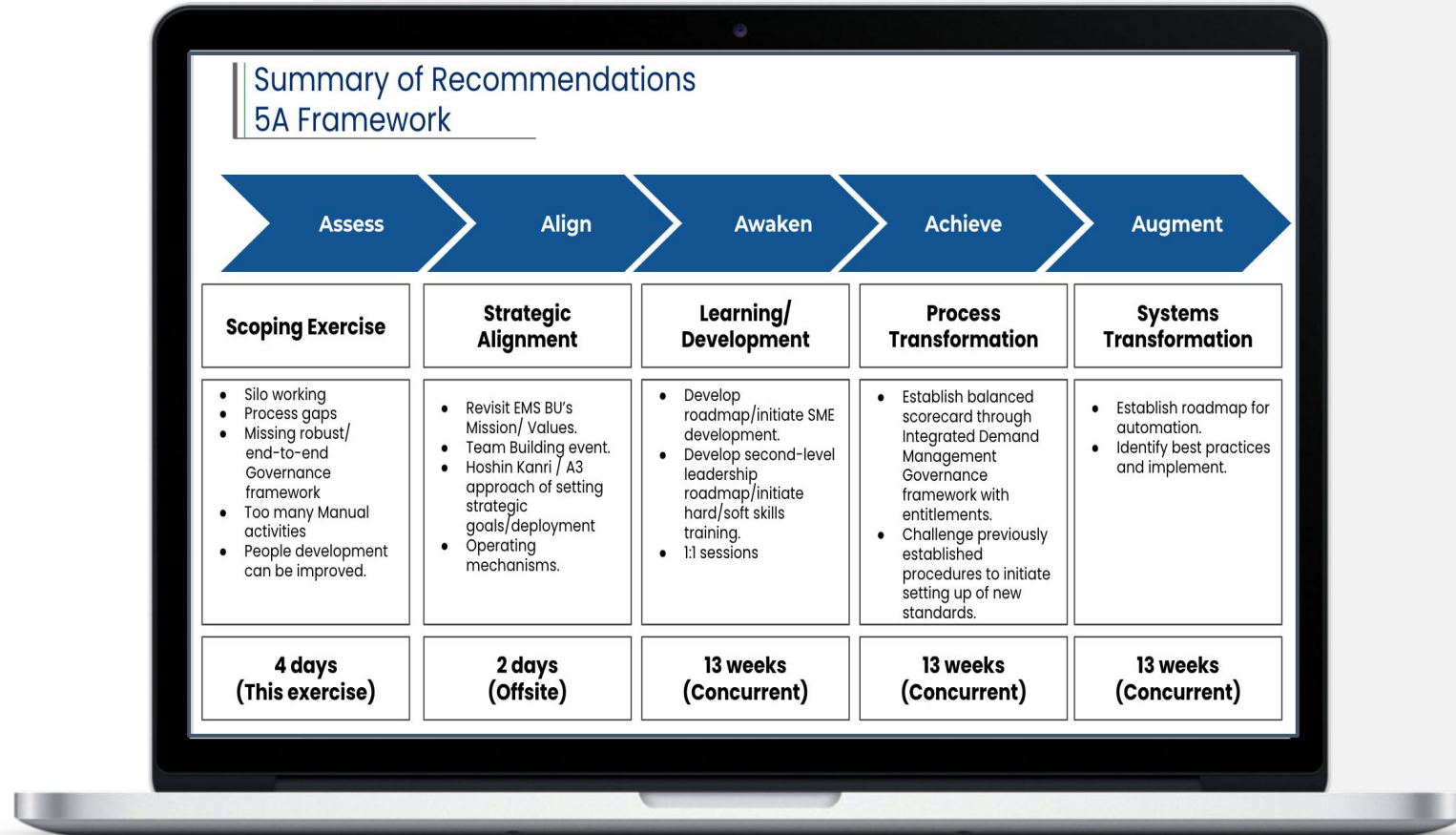
Quick wins for the site

Site comparison (Benchmarking)

Our key proposals

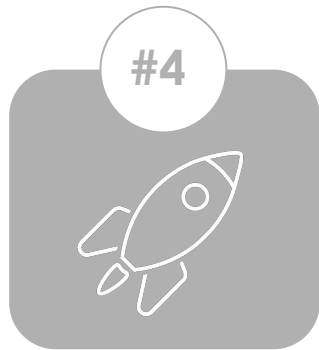
Listened to feedback from HOD on findings/proposals

Summary of Recommendations for Next Steps



Stage #4

Decision to deploy the next stages of the plan



Process Issues:
Automation Opportunities: **Quick Wins**
Automation identified by TNS as immediate actions for XYZ Co.

Process Issues:
Comparison(High-Level): XYZ Co. Vs Best Practice

Process	Owner	Planned Implement Dates
1. Raw Demand	Site PM	19 th July
2. Pre-Management	PM	

Metrics Dashboard-Our Proposal

Process Issues:
Feedback from HODs: Sample Process Mapping of Order-to-Commit process

"Not aware of the entitlement model and the Lvc metric...seems to be the right approach"

"We are always in fire-fighting mode, never came together to improve..."

"DOS metric was a new thing I learnt..."

"Understood the EMS terminology and best practices better..."

"We need to take time-out to do improvements Vs fire-fighting..."

Realised Revenue

Action Notices

Closing Slide



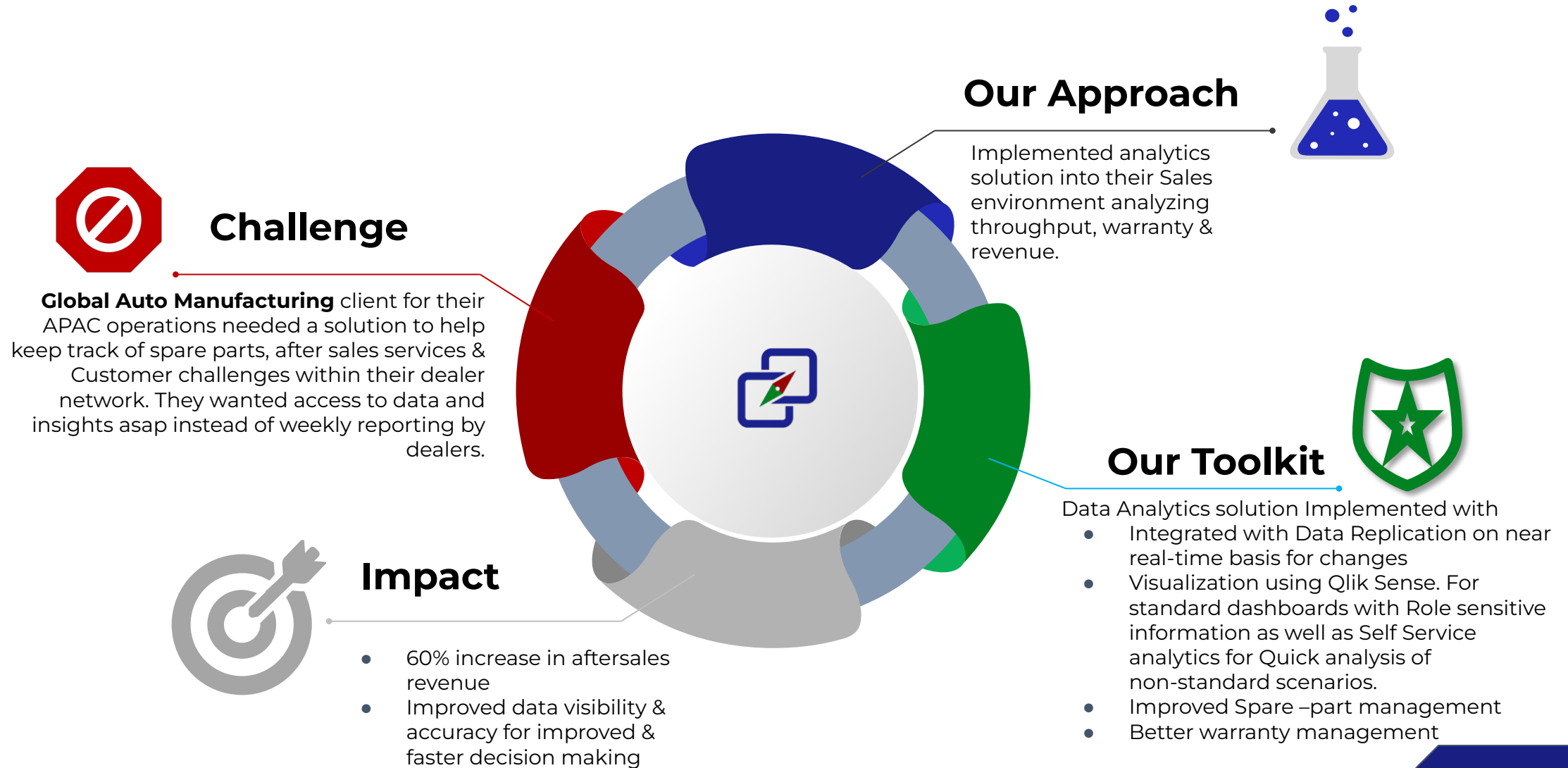
Details on Business Impact

(A few case studies)

[Back to Business
Impact Slide](#)

Business Impact – Data Analytics

60% increase in aftersales revenue in 2 yrs



Back to Business Impact Slide

Business Impact – Data Analytics

17% Revenue growth

\$400K in operational Savings in < 2 yrs



Challenge

India's leading Private Life Insurance Client needed visibility across multiple data silos, Improve Customer response time & satisfaction. They wanted a Strategic decision-making model for Snr Management to Accelerate business growth and market standing



Impact

- 17% Revenue growth
- \$400K in Operational savings in less than 2 years.
- Better and timely visibility to Snr Management for informed decision making

Our Approach



Analytics/BI solution on Web and Mobile based across business areas like Customer Relations, Operations, Sales & Marketing

Our Toolkit

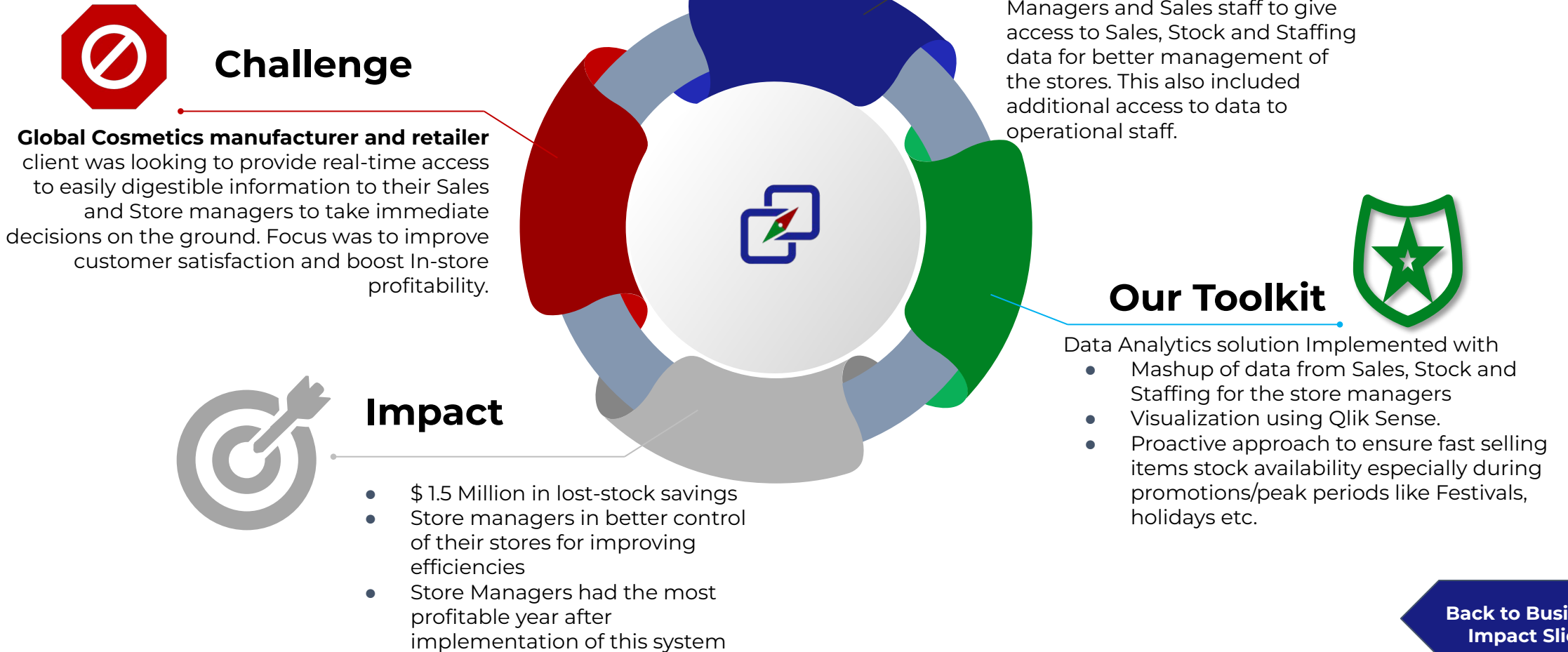


- Data Analytics solution Implemented with
- Integrating data across various data silos in the organization
 - Visualization using Qlik Sense. Also provided information to the Sales and Customer Relationship managers on Mobile devices for better customer relationships and response
 - Single source of truth

[Back to Business Impact Slide](#)

Business Impact – Data Analytics

\$ 1.5 Million in lost-stock savings



Business Impact – Data Analytics

£1 Million penalties eliminated

Average referral time reduced by 20%



Challenge

Large Healthcare client was looking to have a system for better Patient Intelligence, Improvement of A&E and reduction in the penalties being imposed due to various reasons due to access to right information at the right time.



Impact

- £1 Million penalties eliminated
- Average referral times reduced by 20%
- A&E department went up 2 levels within the country
- 11% improvement in Budget management

Our Approach



Analytics solution for various areas like A&E, Command Center Inventory Management. In addition, the Executive dashboards were provided to Mid and Snr management for better visibility.

Our Toolkit



- Data Analytics solution Implemented with
- Visualization using Qlik Sense
 - Movement of Patients from arrival to discharge
 - Better Management of resources between Command Center, A&E and regular wards.
 - Focus on reducing time and improve flow at A&E

[Back to Business Impact Slide](#)

Sing Long Foodstuff



Problem

Sing Long Foodstuff manufactures a variety of savory sauces and instant local dessert products. In the past, they processed around **60,000 purchase orders manually per year** from supermarkets such as NTUC, Sheng Siong, and Giants.



Solution

Our solution has **eliminated the need to manually access the supermarket's portal to download the purchase orders**. Our Auto Bot can automatically process the purchase order and upload it back into the designated portal, making the process much simpler and more efficient. Our solution not only allows the company to **manage their accounts payable with a single person instead of 4**, but it also increases overall performance by five times faster.

Spa Esprit



Problem

Since 1996, Spa Esprit has been Singapore's favourite homegrown apothecary spa, constantly innovating to provide new-age therapies and harnessing the healing benefits of traditional techniques. As the company expands with yearly revenue of USD\$100 million, it need **a solution to manage its accounts payable process across all entities especially in the expansion of its F & B brands.**



Solution

Our solution has **eliminated the need for manual management of POs, GRNs and purchase invoices across all entities.** Our Auto Bot has simplified the AP Automation workflow with the help of AI and ML, making the process much simpler and more efficient.

Our solution **enables the company to manage their accounts payable with an existing headcount of 20 people** processing an estimated \$40m worth of AP each year. The AP Automation Bot has **improved the efficiency of processing PO, GRN, and Supplier Invoice transactions by 100%, reducing the time required from an average of 30 minutes to just 1 minute.**

Moby Dick Supplies



Problem

Moby Dick Supplies is a leading provider of Ship Supplies, catering to the needs of the Marine, Offshore, Oil & Gas markets globally. As the company expands with yearly revenue of USD\$80 million, it need **a solution to manage its accounts payable process and sales enquiry across all entities serving more than 1000 vessels yearly.**



Solution

Our solution has **eliminated the need for manual management of POs, GRNs and purchase invoices across all entities.** Our Auto Bot has simplified the AP Automation and Sales Enquiry workflow with the help of AI and ML, making the process much simpler and more efficient.

Please note that the company has opted not to disclose any information regarding their headcount or the impact the solution has had on their business.

**Business Impact
Slide**