



FROM SELLING STRUCTURES TO SELLING PURPOSE

SNC LAVALIN'S DIGITAL TRANSFORMATION

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MANDATE

Warm welcome to the board of SNC Lavalin! We are Nyenrode Business Consultancy here to advise you on a digital transformation strategy to build towards sustainable growth.

AGENDA

- **Define**
 - Key challenges
 - Key question
- **Analyze**
 - SWOT
- **Alternatives**
 - Options and recommendations
- **Implementation**
 - Finance and Risks
- **Conclusion**

KEY QUESTION

How can SNC Lavalin use digitization for future growth?

KEY CHALLENGES

1. World population growth causes need for buildings and infrastructure
2. Low productivity in construction
3. Low adoption of technology in construction
4. Current earnings model is being challenged today (transition costs reducing to 0)
5. Customers reuse their own data, causing less need for SNC Lavalin services

TODAY'S RECOMMENDATION: AFTER SALES SERVICE MODEL

- Change earnings model to activity-based after sales model
 - Invest in sensing and data analytics to digitize the finished project
 - Increase after-sales income by assisting the customer in optimising their activity
 - Advise on maintenance by using data analytics

SWOT

Strengths	Weaknesses	Opportunities	Threats
Diversified portfolio	Dependability on several major customers	Growing population and urbanization	Low level of technology adoption in construction
Presence in the entire value chain	Risk averse share holders	Customers demand digital solutions	Construction productivity is deteriorating
Reach backlog of pending projects	Bureaucracy	Growth of applicable technology in the market	Current earnings model is being challenged
EDMP has grew by 14% in less than 1 year	Currently transitioning the organizational culture	Nobody has challenged the execution process yet	Customer can better reuse their own data
	No clear digital strategy		

SNC LAVALIN VISION

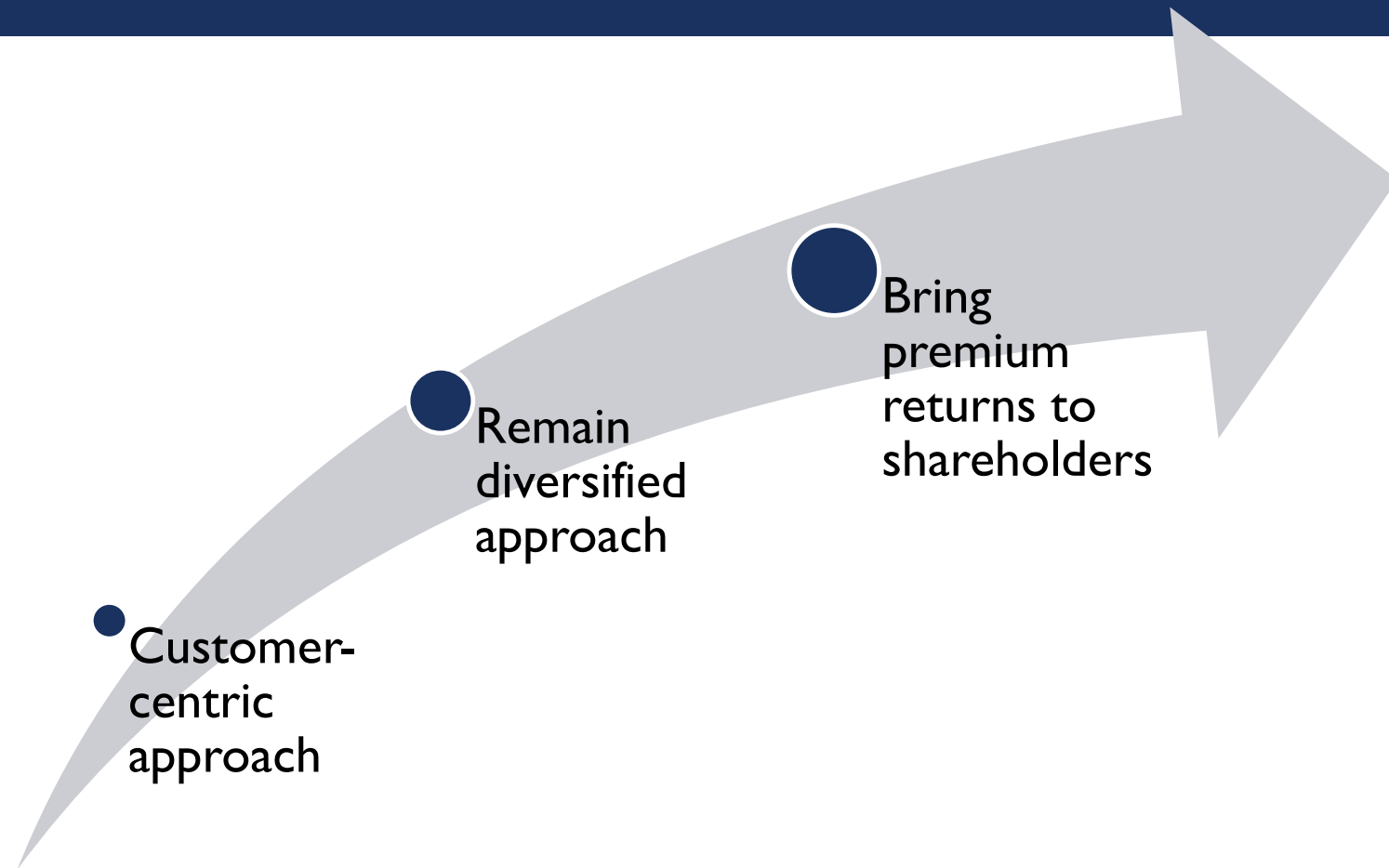
■ **Short-term goals: 2016-2018**

- Expand services offerings
- Expand regional breath, infrastructure & nuclear expertise
- Deliver on operational excellence
- Deliver a client-centric organization
- Deliver a performance-driven culture

■ **Long term goals: from 2018 on**

- Reposition the company on a path of strong profitable growth
- Balance portfolio across sectors
- Tackle digitization wave
- Bring premium returns to shareholders
- Remain leading position in the construction industry

SNC: RIDING THE DIGITIZATION WAVE



COMPREHENSIVE END-TO-END SERVICE OFFERING

Clean Power

Infrastructure

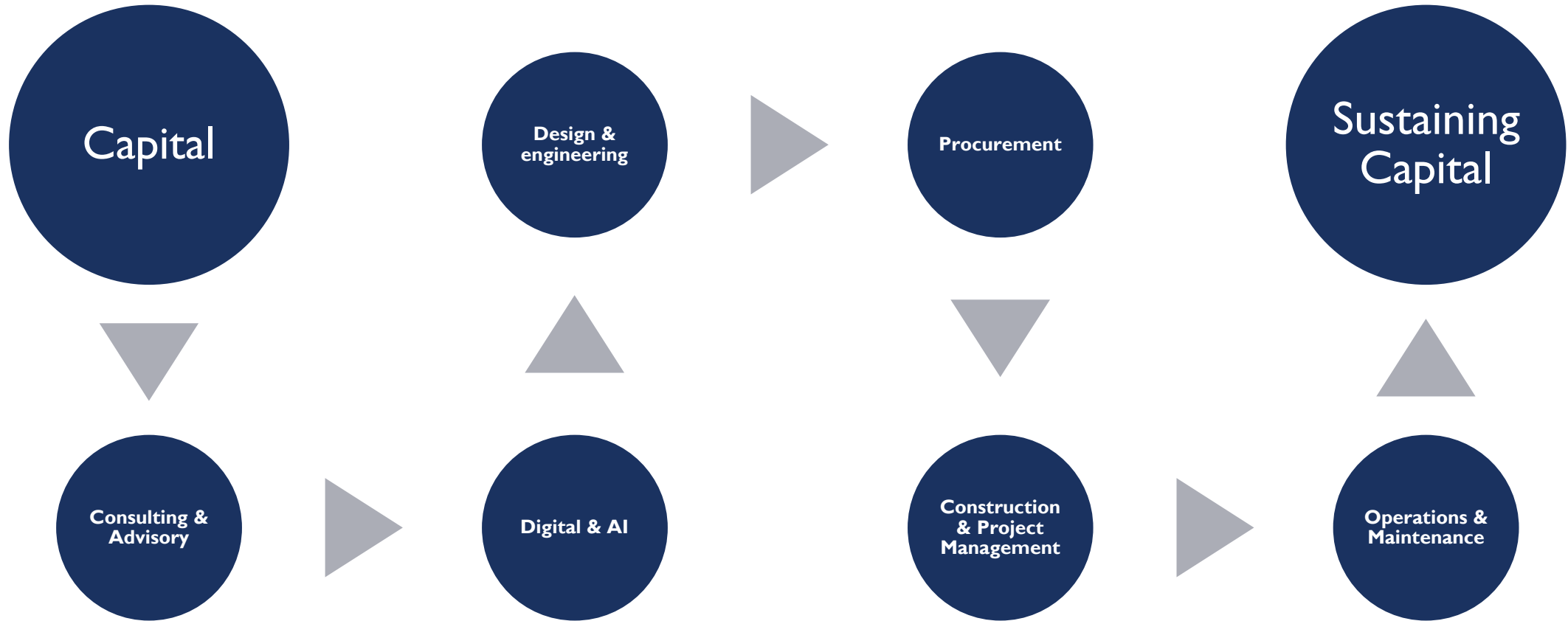
Mining &
Metallurgy

Nuclear

Oil & Gas

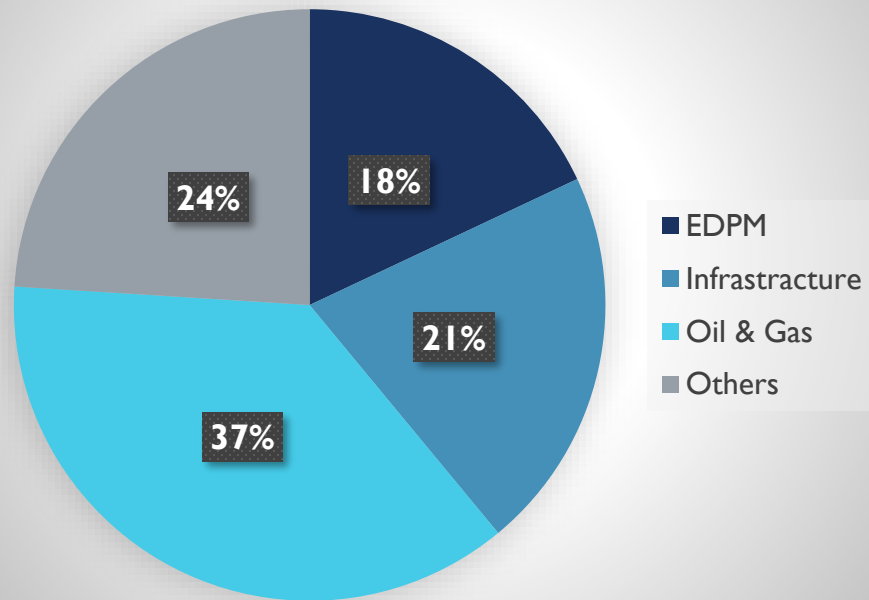
Engineering,
Design &
Project
Management

COMPLETE VALUE CHAIN OFFERING

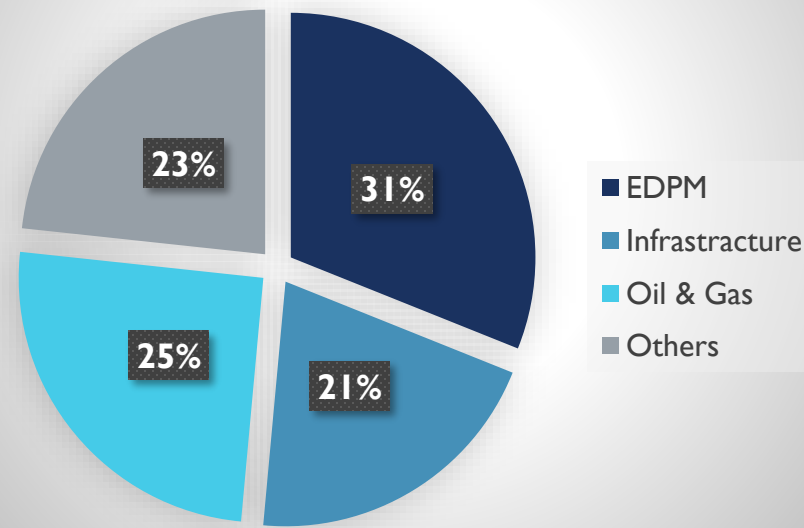


REVENUE GROWTH

2017 Revenues



2018 Revenues (9 months)



- EDMP, Infrastructure, Oil & Gas are bringing 79% of revenues
- EDPM has grown from 18% to 32% in revenue in less than 1 year
- Infrastructure remains bringing steady 21% in revenue
- Oil & Gas has experiences a slight decline of 11%

INDUSTRY TRENDS

Trend #1

- Growth of population, especially in the urban ahead

Trend #2

- Productivity in construction has been deteriorating in the past 5 years

Trend #3

- Construction scores very low on adopting new technology

How can SNC Lavalin accommodate these trends? And is digitization a valid solution?

ALTERNATIVES

1

STAFFING

2

AFTER
SALES
SERVICES

3

CUTTING
OUT
NICHES

ALTERNATIVE #1: STAFFING

Open platform to connect throughout the entire value chain. Connect engineers, materials, services. Connect what is necessary, when it is necessary.

+	-
Agile, flexible, scalable	Could become our own cannibal competition
Jumps in on need for flexibility and efficiency	Easily copied by competition
JIT management implementable and high level of predictability	High risk due to shift in core business

ALTERNATIVE #2: AFTER SALES SERVICES

No longer selling tangible assets, but changing the earnings model to selling running hours.

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New revenue stream	Only applicable to project-based industries
Possibility to gather big data and sell data to new parties	Resistance from clients regarding privacy and data sharing
Increase efficiency	
Decrease needed investment for clients	

ALTERNATIVE #3: CUTTING OUT NICHE MARKETS

Focus on the three leading industries: Oil and Gas, Infrastructure, EDPM (79% of revenue's worth). Sell off other departments.
















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Focus on expertise in three biggest departments	No longer a diversified company
Able to invest more in R&D, digitization and technology	Less authority entity in market due to limited service offering
Lower costs by selling off departments	No longer presence throughout the entire value chain

DECISION METRICS

Digital strategy and 2020 vision focused:

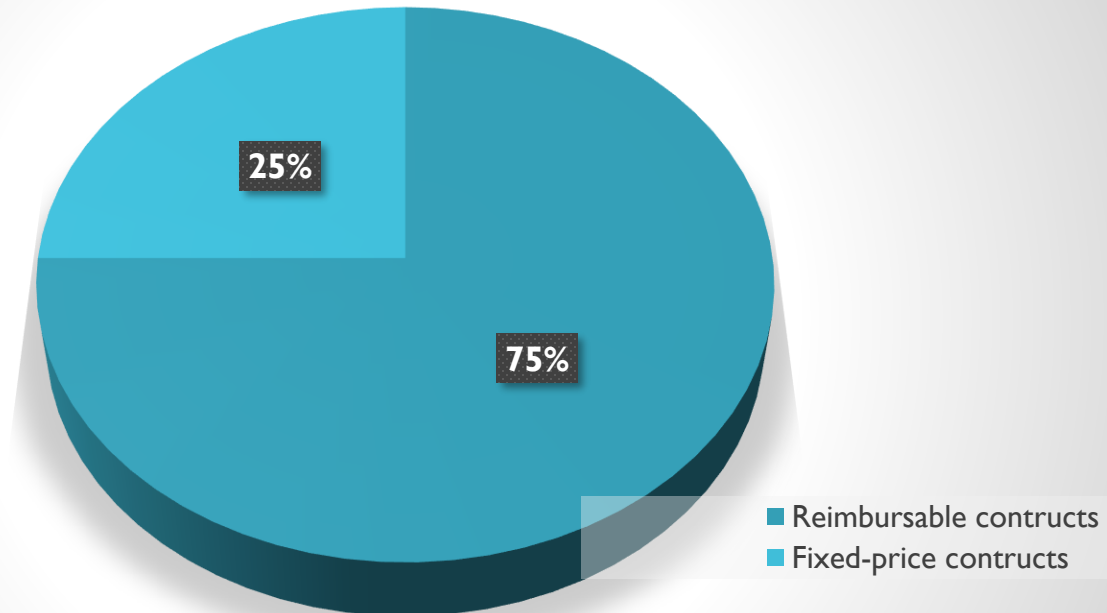
- Lower costs
- Increase efficiency
- Increase productivity
- Building towards SNC DNA → authority
- Customer centricity

DECISION MATRIX

	STAFFING	AFTER SERVICE	NICHE MARKETS
Lower costs			
Increase efficiency			
Increase productivity			
SNC DNA			
Customer centricity			

RECOMMENDATION: ALTERNATIVE 2

Revenue



RECOMMENDATION: FROM SELLING STRUCTURES TO SELLING PURPOSES

SCN Lavalin should become a data driven customer centric company with a closed cradle to cradle resource stream. Selling the purpose behind the structures.

Why?

- Counter reimbursable & engineering service (get paid by purpose and aggregated data)
- Contracts by creating additional revenues
- Tackle growing population (limited resources)
- Tackle urbanization (more efficient planning)
- Be able to offer more customer centric solutions (offer complete unburdening or advice)
- Use data to become more efficient (data analytics as new revenue)
- Use aggregated data to advice on potential inefficiencies

RECOMMENDATION

The transaction form a building company to a service company

Oil and Gas

Pump hours

Infrastructure

Passing cars/running hours

Engineering design project management

Engineer solutions/hours

Nuclear

Running hours

Clean power

Running hours

Mining & Metallurgy

Running hours

Thermal Power

Running hours

GATHER DATA ON EACH STEP OF THE VALUE CHAIN

Capital	Consulting & advisory	Digital & AI	Design & Engineering	Procurement	Construction & project management	Operations & maintenance	Sustaining capital
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Potential data points:

- Available liquidity
- Construction efficiency
- Flaws in the supply chain
- Success of technological solutions
- Endurance of the construction
- Weak parts
- Project time line
- Life span



**Aggregated
data
analytics**

IMPLEMENTATION ONTO O&G CASE

1) Investments

- Data scientist personnel

- Software for data analytics

- Sensoring to implement on O&G projects

2) Finish old earnings model backlog projects and start selling new earnings model

- Data-driven projects come at a premium which we cover by after-sales earnings increase

- Customers receive advise on maintenance efficiency and forecasts on improving runtime efficiency

3) Stay in-house at customers for longer and improve loyalty

- More efficiently build, engineer and manage based on known data

- Use data scientists as a high-margin source of new revenues

FINANCIALS

costs (x IM USD)	2019	2020	2021	2022	2023	
Personnel hired	30	30	30	30	30	
Software	50	50	0	0	0	
Equipment	100	45	90	135	180	
Total added costs	180	125	120	165	210	
income (x IM USD)	2019	2020	2021	2022	2023	
Old earnings model	3000	2900	2700	2600	2500	
new earnings model	0	450	900	1350	1800	
Total revenues	3000	3350	3600	3950	4300	
Revenue growth		12%	7%	10%	9%	
EBIT Growth		170	125	230	185	
Assumptions						
add 15% margin on top due to after-sales						
personal hiring at 150k/person						
initial soft & hardware expenses for sensors at 10% of sales rate, initially 50m						
20k people working in the O&G industry						

RISKS

- Google comes in and provides a business intelligence solution to our client using our sensors
 - Though, it is only a data partner and does not have the needed experience to make the data useful
- Ownership of the building is risky, what if our client defaults?
 - Our capital divisions have extensive experience to mitigate ownership risks and allocate capital efficiently

CONCLUSION

How can SNC Lavalin use digitization for future growth?

- Longer exposure to the customer by after-sales earnings model
- Data-driven improvement of value proposal
- Increasing our main revenue source; reimbursables