ADP! AALTO DISRUPTION PARTNERS

DISRUPT LIFE

A presentation to the CEO of SNC Lavalin
1/9/2019

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Lauri Hanninen
Tommi Bergstrom
How can SNC-Lavalin achieve digital growth?

Focus on Implementing Disruptive Technologies During Building Design, Construction & Maintenance

Offer a Life-Cycle BaaS-Model to fully grasp digital disruptions

Raise a corporate venture capital fund to stay at the cutting edge of digital disruption

Achieve Sustainable & Unprecedented Digital Growth
Content

- External & Internal Analysis
- Strategic Alternatives
- Implementation
- Financials & Risk Analysis
Content

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Productivity of Construction has been historically poor

Low adoption of technology in construction

Low level of R&D in construction (roughly 7x lower than industrials)

Adaptation of New Technology Can Help Boosting Productivity in Construction
External Analysis
Macro Trends

World population is projected to reach 9.7B by 2050

Urban population will exceed rural by roughly 2x by 2050

The Need for Buildings & Infrastructure is Growing.
Platforms are **disrupting** the way customers connect to service providers

**Low complexity** tasks – simple transportation & accommodation – easy to organize

Platforms are Great for **Low-Complexity** Projects…

**Unlikely** to be disrupted by platforms

**Likely** to be disrupted by platforms
WOULD YOU BUY A $200M BUILDING BASED ON A FEW RECOMMENDATIONS & REVIEWS?
SNC is involved with virtually all existing digital advances and technologies.

Digitalization is already disrupting the way of building and living.

Design, Construction and Maintenance are all disrupted by digitalization.

Digital Technology affects the entire Life Cycle of Buildings & Infrastructure.
Internal Analysis
Revenue Structure

70% of E&C Revenue currently from Reimbursable engineering service contracts

30% Fixed Price Contracts

Digitalization and Automation are Likely to Require changes to revenue model
DO CLIENTS WANT TO PAY FOR LABOR HOURS OR A FUNCTIONING DELIVERABLE?
Content

- External & Internal Analysis
- Strategic Alternatives
- Implementation
- Financials & Risk Analysis
Strategic Alternatives
Decision Criteria

Vision 2020 Objectives

- Become one of the top global players in this industry in profitability and growth
- Be recognized as a client-centric delivery-focused organization
- Strong, performance-driven culture
- Continuous focus on operational intelligence
Strategic Alternatives
3 Possible Strategies

Digitalization of Back-Office Management
  • Project Planning
  • Project Controlling

Digital Collaboration Strategy
  • Performance Management
  • Contract Management

Digitalization of On-Site Execution
  • Safety & Quality Control
  • Field Productivity
Strategic Alternatives
3 Possible Strategies

1 Focus on Developing the Design Process

Digital Disruptions:
- Get the client involved in the design phase by combining AR and BIM technology
- Use Advanced Simulation Methods to predict and optimize energy efficiency

Key Issue: How to ensure seamless collaboration between designers, contractors and customers?
Strategic Alternatives
3 Possible Strategies

2. Focus on Developing the Construction Process

Digital Disruptions:

- Use **modular construction techniques** to improve quality, reduce on-site construction times and avoid scheduling problems.

- Use **data analytics** to optimize construction scheduling and provide **dashboards** to increase transparency.

- Use **Image Recognition** for quality control.

**Key Issue**: How to implement standardized methods to individual buildings?
Strategic Alternatives
3 Possible Strategies

3 Focus on Developing the Maintenance Process

Digital Disruptions:

- Implement **sensor technology** in structures for predictive maintenance
- Reduce **energy consumption** by using sensor technology and data analytics

**Key Issue**: How to make sure maintenance is already thought of during construction?
Strategic Recommendation
SNC LIFECYCLE

Focus on the entire Life-Cycle of the Building

Offering a holistic building-as-a-service model enables the benefits of digitalization during all phases of a building’s life cycle.

Benefits of digitalization can be used to optimize the building’s functionality and add value to the customer.
Strategic Recommendation
SNC LIFECYCLE

- Customer is involved in design process using AR- and BIM technology
- BIM Model used in modular construction, which creates 100% transparency about the project to customer
- Sensors are applied within modular structures
- SNC uses sensor data for predictive analytics

A life-cycle approach enables SNC to fully Grasp the benefits of digitalization
Strategic Alternatives
Decision Criteria

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Implementation
Restructure: SNC Lavalin Lifetime

Implement a **new Business Unit** inside EDPR

- Start with 500 employees and grow the employee headcount fast
- Allocate resources from EDPR and hire new employees
Why you should not restructure within the existing Unit?

1. Reach the financial targets EPS of $5 by 2020 and grow dividend
2. Reduce the risk involved in restructuring activities
3. Ease of communication to customers
Implementation
Corporate Venture Capital Unit

Boost Digital Growth - $200M

Why?

• Less riskier than inhouse-development
• Get practical ideas for digital growth
• Eventually acqui-hire the best

How?

• Find companies within focus on building-as-a-service
• Invest into approx. 30 companies with a minor stake
• Help them grow
**Implementation Communication**

**Clients**
- Communicate that lifetime costs are lower with the new model
- Create Relationships

**Investors**
- Communicate reasons CVC
- Investment in Construction has almost doubled in one year

Increase Net Promotor Score to >90
Implementation Timeline

Year 1
- Restructure
- Allocate resources to SNC Lifetime
- Get Funding of $200M

Year 2
- Implement Dashboard

Year 3
- Integrate best CVC-Startups

After 2-3 years implement the **lifetime-strategy** for other sectors as well
Current Situation
Financials
Pressure to Increase Dividends

Declared Dividend Per Share

- 2013: 0.93
- 2014: 0.97
- 2015: 1.01
- 2016: 1.053
- 2017: 1.106
Financials
Debentures Maturing in 2019

<table>
<thead>
<tr>
<th>Debentures</th>
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</tr>
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<tbody>
<tr>
<td>$350 Million</td>
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**Total Debt: $3.2 Billion**
## Financials

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**Total Debt: $3.2 Billion**
Financials
Huge Chunk of Income from 407 ETR

<table>
<thead>
<tr>
<th></th>
<th>SNC-Lavalin</th>
<th>Peers Group Average</th>
<th>Peers Group incl. Canadian Peers Average</th>
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</thead>
<tbody>
<tr>
<td>Share price</td>
<td>$47.00</td>
<td></td>
<td></td>
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<tr>
<td>Less H407</td>
<td>(27.97)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less other concessions</td>
<td>(3.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted E&amp;C price</td>
<td>$16.01</td>
<td></td>
<td></td>
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<tr>
<td>2019 adjusted EPS from E&amp;C consensus</td>
<td>$3.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E&amp;C P/E Multiple</td>
<td>5.1</td>
<td>11.3</td>
<td>12.5</td>
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Building-as-a-Service
## Financials
### Building-as-a-service Cost

<table>
<thead>
<tr>
<th>Type</th>
<th>Investment</th>
</tr>
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<tbody>
<tr>
<td>Labor costs</td>
<td>2,500 New Employees</td>
</tr>
<tr>
<td></td>
<td>~$25 Million/year</td>
</tr>
<tr>
<td>CVC</td>
<td>$200 Million invested within 5 years</td>
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<tr>
<td></td>
<td>$40 Million/year</td>
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<tr>
<td>Restructuring cost</td>
<td>~$5 million/year for 3 years</td>
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Financials
Cumulative Costs

- 2019: 65
- 2020: 130
- 2021: 195
- 2022: 255
- 2023: 315
Financials
Funding of the New Model

Net Income

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Income after Dividends

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Financials
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Cash Flow for Investment

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Key Assumptions:

Revenue 2018: $10B
Revenue Growth: 2.5%
Plowback Ratio: 70%
Net Margin: 4%
Interest Payments: $120M
Financials
Revenue Model

Before:
Pay per hour/Lump sum

Building-as-a-service:
Pay for a functioning building
Financials
Revenue Model

Before:
Pay per hour/Lump sum

Building-as-a-service:
Pay for a functioning building

Revenue from Projects and recurring revenue from predictive maintenance
Financials
Revenue Model

Before:
Pay per hour/Lump sum

Revenue from Projects
Pay for lamps and electricity

Building-as-a-service:
Pay for a functioning building

Revenue from Projects and **recurring revenue** from predictive maintenance
Pay for Light
<table>
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<th>Risk</th>
<th>Probability</th>
<th>Impact</th>
<th>Mitigation</th>
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| Clients not interested  | Med         | High   | - Communicate effectively  
                           - Emphasize cost savings and customer satisfaction |
| Cybersecurity           | Med         | Med    | - Invest in data security and breach prevention                              |
| Outside competition     | Low         | High   | - Act fast  
                           - Foster excellent relationships with clients |
You asked us…

“How will digital transformation affect our business?”

“How should our design engineering business change its business model?”

“How do we fund digital investments?”

“What should we tell investors?”
How can SNC-Lavalin achieve digital growth?

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