Designing Disruption

Haerin Shin, Adam Schwarz, Jaewon Lee, Jason Han
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We designing the business

1) In business model
   Focus on customer need
   & Platform

2) Getting money form investors
   Selling stock
   & managing systems more in diverse field
Disruption has come

From 2017 to 2018, Construction technology landscape

<table>
<thead>
<tr>
<th>Category</th>
<th>2017-2018 Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms</td>
<td>1,000 → 2,000</td>
</tr>
<tr>
<td>Cluster</td>
<td>3 sites → Constellation</td>
</tr>
<tr>
<td>Investment</td>
<td>80% increased</td>
</tr>
<tr>
<td>Geo center of gravity</td>
<td>N. America 75% → 80%</td>
</tr>
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</table>

- **Software**
  - (Material management, Drawing)
- **Human resource platform**
- **Technology transfer**
- **Drone and 3D printing**
What can we deliver?

Core value

• Safety
• Integrity
• Collaboration
• Innovation

What Customer wants

• Safe and well-managed project
• No additional cost by bad design
• No additional cost by delay
• Certified and well experienced resources
• Transparent communication

Excellent service, Authorized technology, Productivity
Business Portfolio

Profitable

<table>
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<th>Nuclear Clean Power</th>
<th>EDPM</th>
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<td>Oil and Gas Mining</td>
<td>Infrastructure</td>
</tr>
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Infrastructure has long term contract Profit (EBITDA margin) to be improved
## Decision matrix

<table>
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<tr>
<th>Goal</th>
<th>Feasibility</th>
<th>Cost</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquire more engineering technology by acquisition</td>
<td>Unfav</td>
<td>Unfav</td>
<td>Fav</td>
</tr>
<tr>
<td>Go hard for restructuring</td>
<td>Unfav</td>
<td>Fav</td>
<td>Unfav</td>
</tr>
<tr>
<td>Invest more on R&amp;D</td>
<td>Fav</td>
<td>Unfav</td>
<td>Fav</td>
</tr>
<tr>
<td>Discard non-profitable business</td>
<td>Unfav</td>
<td>Fav</td>
<td>Unfav</td>
</tr>
<tr>
<td>Embrace disruption</td>
<td>Fav</td>
<td>Fav</td>
<td>Fav</td>
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Financial Snapshot

• 2018 Projected Revenue for SNC-Lavalin = ~ £10 Billion
• 2018 Expected Earnings Per Share = £3.60-£3.85
• Atkins Acquisitions = £2.1 Billion
  • Pension Deficit = £474 Million
  • SNC-Lavalin took £870 Million loan to fund acquisition
• Company inefficiencies amongst overlap of roles and responsibilities after Atkins acquisition, i.e. fixed costs too high
## Costs

<table>
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<th>Action</th>
<th>Cost</th>
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<tr>
<td>Acquire digital start-ups to provide propel and command the engineer-to-client disruption</td>
<td>£900 Million</td>
</tr>
<tr>
<td>Start New Business Division within SNC-Lavalin focused around pushing adoption of technology in low level industries Repurpose Atkins Employees</td>
<td>£470 Million</td>
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<tr>
<td>Continued support of start-ups and disrupters through 2021</td>
<td>£690 Million</td>
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## Increased EBIT Margins in EDPM

<table>
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<tr>
<th>Legacy</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11%</td>
<td>12%</td>
<td>14%</td>
<td>15%</td>
<td>18%</td>
</tr>
</tbody>
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<tr>
<th>Our Recommendations</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tr>
<td></td>
<td>12%</td>
<td>18%</td>
<td>21%</td>
<td>25%</td>
<td>28%</td>
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Revenue Projections

2018 Revenue Markets

- Capital: 32%
- Thermal Power: 9%
- Mining and Metallurgy: 6%
- Clean Power: 26%
- Nuclear: 21%
- EDPM: 2%
- Oil & Gas: 1%
- Infrastructure: 3%

1/10/2019
Revenue Projections

Revenue Projections Through 2021

<table>
<thead>
<tr>
<th>YEAR</th>
<th>£ BILLION</th>
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<tbody>
<tr>
<td>2017</td>
<td>9.10</td>
</tr>
<tr>
<td>2018</td>
<td>10.00</td>
</tr>
<tr>
<td>2019</td>
<td>10.90</td>
</tr>
<tr>
<td>2020</td>
<td>11.881</td>
</tr>
<tr>
<td>2021</td>
<td>12.95029</td>
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## Risks and Mitigations

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<th>Risk</th>
<th>Likelihood</th>
<th>Damage</th>
<th>Mitigation</th>
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<tr>
<td>Other Players and Disruptors</td>
<td>High</td>
<td>Medium</td>
<td>First to Market, Dominate IP landscape, Embrace and Support disruption: command!</td>
</tr>
<tr>
<td>Cyber and Data Security</td>
<td>Medium</td>
<td>Medium</td>
<td>Encryption, Firewalls, Digital Twins, A.I.</td>
</tr>
<tr>
<td>Shareholder Revolt</td>
<td>High</td>
<td>Medium</td>
<td>Preferred Shares, Comprehensive EPS campaign, Board to SH communication</td>
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Recommendation:

Managed service platform

Embrace disruption
First to innovate
Recommendation: Managed service platform

Customer needs:
- Lower (transaction) cost

Current Alternative:
- Freelance platforms
- Reusing their data

Disadvantage:
- Cheap but unreliable
- No standardized platform
- Difficult to use
Recommendation: Managed service platform

Database
- Customer projects
- Customer behaviors
- Price
- Cost
- Skills needed

Network
- Customers
- Engineers
- Teams
- 3PP
- Suppliers

Brand
- Reliability
- Safety
- Security
Recommendation: Managed service platform

What it is

- SW Subscription model platform
- Connect customer & engineers
- Standardized project management system
- Risk/Transaction management

Benefits

- Balanced internal & external engineers
  - Deeper pool of HR
  - Less fixed cost
- New business model
  - Target B2C
Recommendation: Managed service platform

**Resource management**
- Connect customer & engineers
- Certification process for engineers
- Procurement & etc

**Project management**
- Customers to manage their projects
- Project validation and modification

**Risk management**
- Transaction safety
- Capital to manage risk
Recommendation: Managed service platform

Technology
- Cloud
- Big data
- Machine Learning

Trend
- Aggressive M&A
- Less needs for internal engineers
- High fixed cost & debt
- Profitable growth
## Executive Summary

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