ENGINEERING - A NEW AGE OF DIGITAL GROWTH

LAZARIDIS CONSULTING

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We need to achieve digital growth and become sustainable
RECOMMENDATION

- Improve our digital capabilities through procuring Software as a Service.
- To improve our customer responsiveness to meet our shareholder expectations and exceed beyond vision 2020
AGENDA

- Where do we stand today?
- What is the business context?
- What does the industry look like?
- Who are our shareholders?
- What are we good at?
- What does the market look like?
- What alternatives do we have?
- Suggested implementation
- Financial Projections
WHAT DOES YOUR COMPANY LOOK LIKE TODAY?

- Low credit rating, but solid capital asset portfolio
- Successfully diversified into 6 segments
- Looking ahead
- Potential risk of internal health
YOUR BUSINESS CONTEXT

- Shift to development of technology ($8 Billion Increase)
- Population is on the rise (9.7 Billion by 2050)
- People are worried about job security
- Increase in digital needs
- Looking for “proven” technology
# STAKEHOLDER ANALYSIS

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>What do they need?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>Job security, engaging jobs</td>
</tr>
<tr>
<td>Investors</td>
<td>Financial success</td>
</tr>
<tr>
<td>Customers</td>
<td>“Cool”, and proven technology</td>
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</tbody>
</table>
WHAT DOES THE ENGINEERING AND DIGITAL INDUSTRY LOOK LIKE?

- You can be the first mover into this industry
- Potential risk of entrants
- Unique product – customer needs
- Attractive market!
MARKET ANALYSIS

- Urban population growth +2.4 Billion People by 2050
- Customers preferences have shifted (Digital Integration)
- EDPM 14% Increase from 2017-2018
Decision Criteria:
- Stakeholder Preferences
- Digital Growth
- Funding Priorities
- Maintain Competitive Advantage
- Aligns with Company Values
DIGITAL GROWTH – WHAT DO WE NEED?

- 1. Supply Chain Optimization
- 2. Human Capital Management Optimization
- 3. Design Simulation Document Sharing
DECISION CRITERIA

- Stakeholder Preferences
- Digital Growth
- Funding Priorities
- Maintain Competitive Advantage
- Aligns with Company Values
CONSIDERED ALTERNATIVES

- Develop Digital Technology Internally
- Outsource Data Needs to a Third Party Company (SAAS)
- Increase Contract Projects
ALTERNATIVE 1 – DEVELOP DIGITAL TECHNOLOGY INTERNALLY (R&D)

**PROS**
- Leverage existing resources and capabilities (Atkins)
- Continue to Innovate
- Customize to our needs
- Minimize spending

**CONS**
- Implementation is timing consuming
- Training requests
- Demographics of employees skill sets
ALTERNATIVE 2 – OUTSOURCE DATA NEEDS TO A THIRD PARTY COMPANY (SAAS)

**PROS**
- Leverage industry expertise
- Developed/Secure product

**CONS**
- Loss of Control
- Education and training costs

*Materials management, Shipping Received, Purchasing, Accounting, Secure Document Sharing*
ALTERNATIVE 3 – MOVE AWAY FROM BILLABLE HOURS

PROS

- Through internal analytics software, efficiencies are realized which leads to greater competitive bids

CONS

- Internal capabilities of analytics
- Projects behind schedule

Increase the 25% contract share to a greater amount
# Alternative Matrix

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Digital Growth</th>
<th>Funding</th>
<th>Maintain Competitive Position</th>
<th>Company Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop R&amp;D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outsource to 3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>More Contracts</td>
<td></td>
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</tbody>
</table>

- **Develop R&D**: Green in Funding, Green in Maintain Competitive Position, Green in Company Values.
- **Outsource to 3rd**: Red in Digital Growth, Green in Maintain Competitive Position, Green in Company Values.
Outsource Data Needs to Software Service Companies (SAAS)

- Kinaxis
- BlackBerry
- Procure SAAS – Subscription based
  1. Kinaxis Supply Chain Intelligence
  2. Secure Cloud – Based Document Management Service
IMPLEMENTATION - KINAXIS SUPPLY CHAIN INTELLIGENCE – TIMING 2019

Supply Chain Intelligence
- Requirements Gathering
- On-Site Consultation
- Customization
- Simulations

Internal Resources
- Communicate
- Recruit 6 SCM Resources
- Training & Development
- Extend to Design Teams

IT Systems Readiness
- Systems Capacity Analysis
- Data Validation
- Data Transfer
- Ongoing Systems Support
IMPLEMENTATION - SECURE DOCUMENT SERVICE (BLACKBERRY) - 2019

Cloud Based SAAS
- Requirements Gathering
- On-Site Consultation
- Customization
- Simulations

Internal Resources
- Communication
- Recruit 6 IT Resources
- Training & Development
- Extend to Internal Teams

IT Systems Readiness
- Systems Capacity Analysis
- Data Validation
- Data Transfer
- Ongoing Systems Support

Requirements Gathering → On-Site Consultation → Customization → Simulations
Communication → Recruit 6 IT Resources → Training & Development → Extend to Internal Teams
Systems Capacity Analysis → Data Validation → Data Transfer → Ongoing Systems Support
FINANCIAL PROJECTIONS

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<tbody>
<tr>
<td>Revenues</td>
<td>$11,000,000,000</td>
<td>$12,100,000,000</td>
<td>$13,310,000,000</td>
<td>$14,641,000,000</td>
<td>$16,105,100,000</td>
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<tr>
<td>Operating expenses</td>
<td>1,430,000,000</td>
<td>1,573,000,000</td>
<td>1,730,300,000</td>
<td>1,903,330,000</td>
<td>2,093,663,000</td>
</tr>
<tr>
<td>Implementation</td>
<td>1,750,000</td>
<td>1,750,000</td>
<td>1,750,000</td>
<td>1,750,000</td>
<td>1,750,000</td>
</tr>
<tr>
<td>EBITDA</td>
<td>9,568,250,000</td>
<td>10,525,250,000</td>
<td>11,577,950,000</td>
<td>12,735,920,000</td>
<td>14,009,687,000</td>
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<tr>
<td>Net Income</td>
<td>$4,114,347,500</td>
<td>$4,525,857,500</td>
<td>$4,978,518,500</td>
<td>$5,476,445,600</td>
<td>$6,024,165,410</td>
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</tbody>
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Assumptions
10% Organic growth YR/YR
Operating Expenses 13%
Net Income 42% (Based on 407 ETR)
### Break-even Analysis

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<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Engineering Hours</td>
<td>$500</td>
</tr>
<tr>
<td>Cost</td>
<td>$1,750,000</td>
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<tr>
<td># of Hours</td>
<td>3500</td>
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<tr>
<td>Risk</td>
<td>Metric</td>
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<tr>
<td>--------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Employees React Negatively</td>
<td>Engagement survey</td>
</tr>
<tr>
<td>Customer Adaptation</td>
<td>% change in sales</td>
</tr>
<tr>
<td>Disruption</td>
<td>New tech</td>
</tr>
<tr>
<td>Expectations</td>
<td>% Change in efficiency (Billable hours)</td>
</tr>
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DASHBOARD – KPI’S BY 2020

Inventory Turns 24/ year
Material Costs Down 5%
Warehouse Utilization 95%
Operating Efficiency 92%
Stock Outs < 2%
Engineering Change Responsiveness 48 Hours