



ENGINEERING - A NEW AGE OF DIGITAL GROWTH

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THE PROBLEM

- 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

Problem

Analysis

Decision

Alternatives

Recommendation

Implementation

Finance

Dashboard

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

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STAKEHOLDER ANALYSIS

Stakeholder	What do they need?
Employees	Job security, engaging jobs
Investors	Financial success
Customers	“Cool”, and proven technology

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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

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DECISION CRITERIA

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

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DIGITAL GROWTH – WHAT DO WE NEED?

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

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CONSIDERED ALTERNATIVES

Develop Digital
Technology Internally

Outsource Data Needs to a
Third Party Company (SAAS)

Increase Contract
Projects

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ALTERNATIVE I – 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

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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

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ALTERNATIVE MATRIX

	Stakeholders	Digital Growth	Funding	Maintain Competitive Position	Company Values
Develop R&D	Green	Red	Green	Red	Green
Outsource to 3rd	Green	Green	Green	Green	Green
More Contracts	Red	Red	Green	Green	Green

Problem → Analysis → Decision → Alternatives → Recommendation → Implementation → Finance → Dashboard

RECOMMENDED ALTERNATIVE

Outsource Data Needs to Software Service Companies (SAAS)

- Kinaxis
- BlackBerry

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IMPLEMENTATION

- Procure SAAS – Subscription based
 1. Kinaxis Supply Chain Intelligence
 2. Secure Cloud – Based Document Management Service

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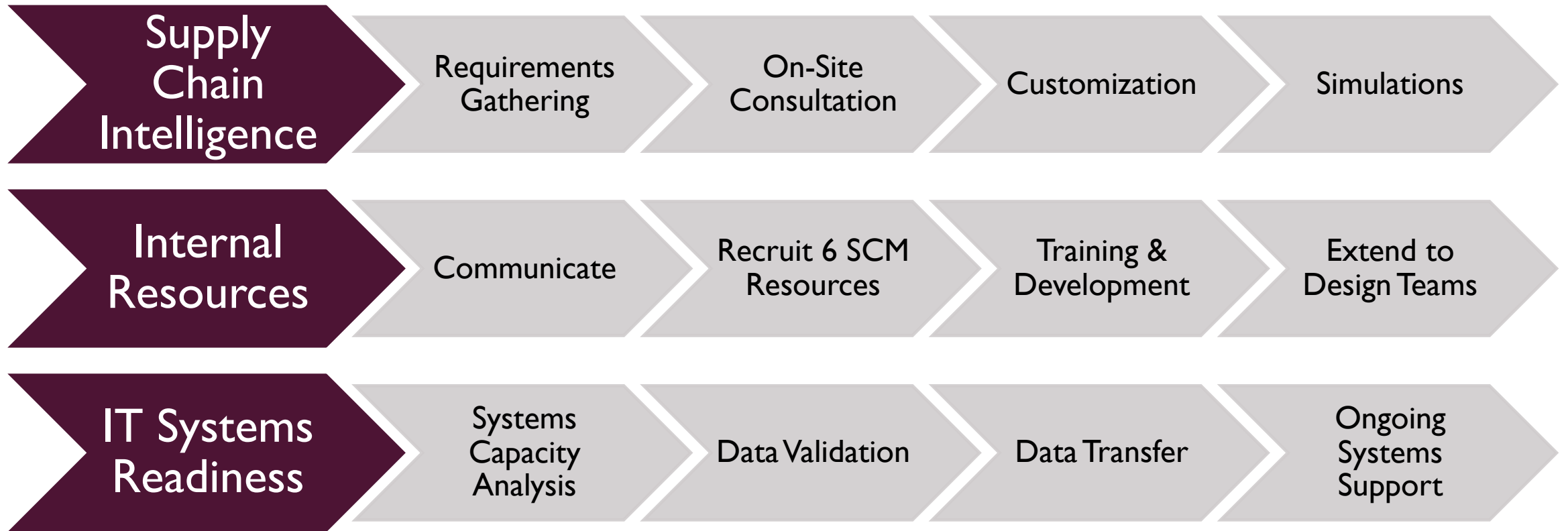
Recommendation

Implementation

Finance

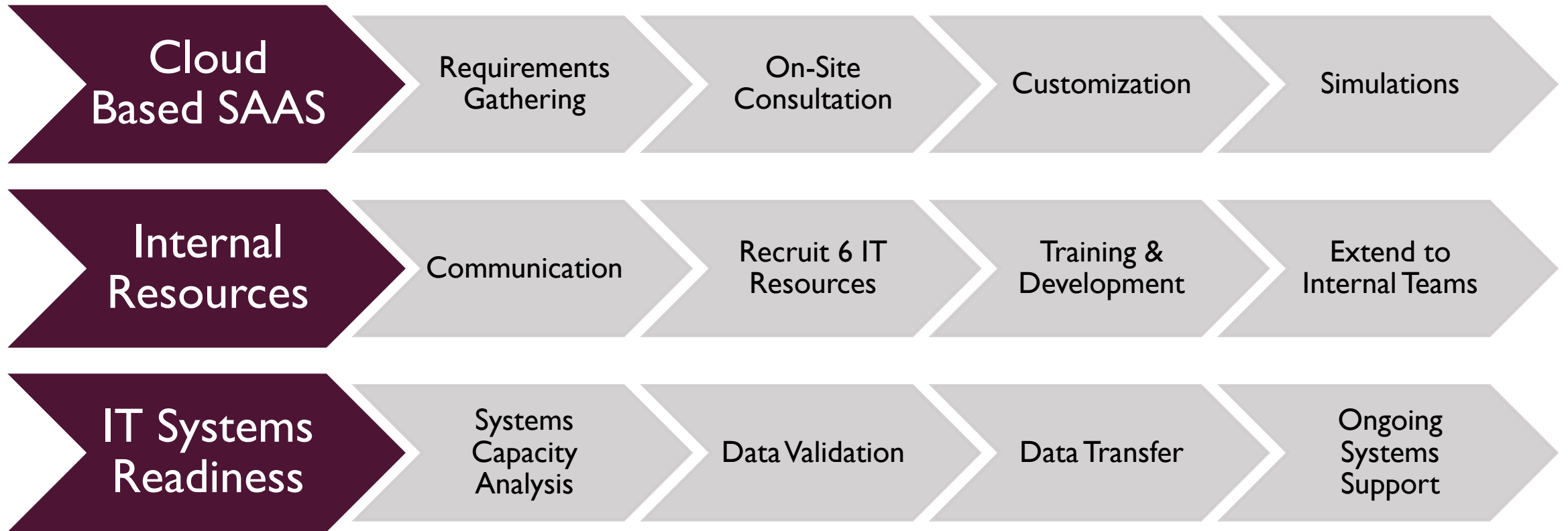
Dashboard

IMPLEMENTATION - KINAXIS SUPPLY CHAIN INTELLIGENCE – TIMING 2019



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IMPLEMENTATION - SECURE DOCUMENT SERVICE (BLACKBERRY) - 2019



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FINANCIAL PROJECTIONS

	2019/2020	2020/2021	2021/2022	2023/2024	2024/2025
Revenues	\$11,000,000,000	\$12,100,000,000	\$13,310,000,000	\$14,641,000,000	\$16,105,100,000
Operating expenses	1,430,000,000	1,573,000,000	1,730,300,000	1,903,330,000	2,093,663,000
Implementation	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
EBITDA	9,568,250,000	10,525,250,000	11,577,950,000	12,735,920,000	14,009,687,000
Net Income	<u>\$ 4,114,347,500</u>	<u>\$ 4,525,857,500</u>	<u>\$ 4,978,518,500</u>	<u>\$ 5,476,445,600</u>	<u>\$ 6,024,165,410</u>

Assumptions

10% Organic growth YR/YR

Operating Expenses 13%

Net Income 42% (Based on 407 ETR)

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BREAK-EVEN

Break-even Analysis	
Engineering Hours	\$500
Cost	\$ 1,750,000
# of Hours	3500

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RISKS

Risk	Metric	Contingency
Employees React Negatively	Engagement survey	Communication is key
Customer Adaptation	% change in sales	Provide proof that tech works
Disruption	New tech	Scan and look for opportunities
Expectations	% Change in efficiency (Billable hours)	Clear communication

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

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