Enterprise Architecture driven success in business transformation

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18-Sep-2018
Agenda

1) St1

2) 1st Transformation 2013->2018, Build a competitive common Nordic core
   • Background
   • Approach

3) 2nd Transformation 2016-> , Digital transformation
   • Background
   • Approach

4) Learnings
The global energy challenge
St1 vision: “To be the leading producer and seller of CO$_2$-aware energy”

Our goal is to

- Develop and commercialize functional and environmentally sustainable solutions
- Deliver these solutions profitably

Each solution must be

- Technically ready for use today
- Ecologically and ethically sustainable
- Logistically feasible

$$E = St^1$$
St1 value chain video
St1 home market

Home market consists of Finland, Sweden and Norway. Headquarters in Helsinki. Employs more than 750 people. Operations are strengthened by strategic long-term partnerships in various areas.

Station network
Total of ca. 1400 St1- and Shell-sites in Finland, Sweden and in Norway.

Energy production

Market shares 2017

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>Sweden</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol</td>
<td>21.9%</td>
<td>19.0%</td>
<td>23.4%</td>
</tr>
<tr>
<td>Diesel</td>
<td>18.7%</td>
<td>14.6%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Light fuel oil</td>
<td>23.2%</td>
<td>22.4%</td>
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Key figures 2017

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Net Sales, MEUR</td>
<td>6,540</td>
<td></td>
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</tr>
<tr>
<td>Profit for the period, MEUR</td>
<td>209.1</td>
<td></td>
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</tr>
<tr>
<td>Return on Equity, %</td>
<td>23.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1995</td>
<td>Greenergy Baltic was founded to operate in the oil wholesale business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>St1 Biofuels Oy was founded together with VTT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>ExxonMobil Finnish affiliate Oy Esso Ab was acquired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>A network of 200 sites in Sweden and Norway was purchased from StatoilHydro ASA TuuliWatti Oy was founded together with S-Voima</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Acquisitions were made: St1 Energy Oy (former Oy Shell Ab) St1 Energy AB (former AB Svenska Shell) St1 Refinery Oy (former Shell Raffinaderi AB)</td>
<td></td>
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</tr>
<tr>
<td>2014</td>
<td>Agreement on the purchase of the Shell’s Norwegian downstream company</td>
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<td>2017</td>
<td>St1 Finance Oy was founded</td>
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<td>2018</td>
<td>St1 implements a Nordic organization</td>
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1st Transformation 2013->
Background for the 1st transformation

Fast growth through acquisitions led to a fragmented operating model

• Poor common understanding of business models and processes
  • Low readiness to change
  • Long time to market

• Outdated IT portfolio and unavailability of business critical data
  • Costly legacy IT systems and overlapping functionalities
  • Lack of IT support in inventory process
  • Poor sales data visibility and quality
Objectives

- Enhancing key competitive capabilities
- Harmonization of business operations
- Elimination of overlapping systems

Improve St1's business efficiency and competitiveness

People

Processes

IT
Meet in the middle approach

1. **Understand where we are**
   - Assess current process and IT
   - Operational issues
   - Business owners and IT specialists
   - Validation by higher management

2. **Establish where we want to go**

3. **Define how to get there**
   - Gaps and implications
   - Plan and next steps

- Requirements from strategy and business
- Capabilities needed
- Higher management

- Gap

- Operational issues
- Business owners and IT specialists
- Validation by higher management
Enterprise Architecture Method - driven by Business Capability

A **capability** is the ability to perform or achieve certain actions or outcomes.
Strategy & Business model analysis -
Fuel station business models and related value chains
Fuel station business models related key capabilities

Fuel Stations
- Shell service station
- St1 service station
- Shell express station
- St1 automat station

Variant Capabilities
- Convenience retail
- Payment method mgmt
- Fuel tank mgmt & reconciliation

Shared Capabilities
- Pricing
- Operations profile change
- Launch
- Card Payment
St1 capability map
Focus on architecturally relevant areas
Case: Process analysis→ Retail Sales
Focus on architecturally relevant areas
Case: IT Analysis → Retail Sales
Recommendations

Recommended Focus Areas 1/3
Description of objectives and related requirements

- Strengthen Customer account management and segmentation
  - Objective: Simplify & enhance service delivery & pipeline grooming
  - Description and requirements: Improve visibility to customer data and increase sales
  - Strategic Goal: Increase profitability and market share through improved pricing solution

Recommended Focus Areas 2/3
Description of objectives and related requirements

- Improve visibility to customer data and increased sales
  - Objective: Simplify & enhance payment solutions & increase reliability
  - Description and requirements: Improve and enhance payment solutions & increase reliability
  - Strategic Goal: Increase profitability and market share through improved pricing solution

Recommended Focus Areas 3/3
Description of objectives and related requirements

- Exceptional guest experience & customer satisfaction
  - Objective: Improve visibility of data and business decision making
  - Description and requirements: Improve visibility of data and business decision making
  - Strategic Goal: Increase profitability and market share through improved pricing solution

- Reduce operational business risk
  - Objective: Reduce operational business risk
  - Description and requirements: Reduce operational business risk
  - Strategic Goal: Increase profitability and market share through improved pricing solution

- Improve controls and reconciliation
  - Objective: Improve controls and reconciliation
  - Description and requirements: Improve controls and reconciliation
  - Strategic Goal: Increase profitability and market share through improved pricing solution
St1 today is the result of many acquisitions & organic growth resulting in system setup with overlaps and functional gaps.

Platform is needed to provide a foundation to:

- Support new business models e.g. Compete with an integrated package and integrated E2E solution in contextual internet
- Provide improved visibility, reliability, performance and user experience through common payment, delivery and care interfaces
Proposed & agreed technology platform
Illustrative St1 Transformation Roadmap

Stage 0: As-Is Analysis
• 2013

Transformation targets & plan
Process modeling in use. Users trained and models used in project work.

Stage 1 & 2: Improvement and productivity
• 2014-2015

Integrated Processes & Master data
Process streamlined and master data practices clarified. Step 1 of ERP as-is IT replacement

Optimized core
ERP deployment step 2, consistency in execution, cost effectiveness and reliability of processes and IT

Stage 3: Excellence
• 2016-2017

Business modularity
Business modularity, agility through recomposability and support for new businesses. CRM and other IT elements deployed.

Roadmap definition
Process models & requirements

1
Process modularity
ERP As-Is IT replacement step 1
Master Data
Business rules

2
Sales & Delivery
Online sales
Procurement
Metrics & Process Analysis

3
CRM deployment
Aligned St1 platform
Extended automation support

A unified company that is capable of agile adjustment of its operating models to adapt new business models utilizing existing modular designs
**INITIAL HIGH LEVEL PLAN FROM 2013**

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**Stage 0: As-Is Analysis**
- 2013

**Transformation targets & plan**
- Process modeling in use
- Users trained and models used in project work

**Stage 1 & 2: Improvement and productivity**
- 2014-2015
  - **Optimized core**
    - Integrated Processes & Master data
    - Process streamlined and master data practices clarified
  - ERP deployment
    - Step 2: consistency in execution, cost effectiveness and reliability of processes and IT

**Stage 3: Excellence**
- 2016-2017
  - **Business modularity**
    - Business modularity, agility through reconfigurability and support for new businesses. CRM and other IT elements deployed.

**Roadmap definition**
- Process models & requirements
- CRM deployment
- Sales & Delivery
- Online sales
- Procurement
- Extended automation support
- Metrics & Process Analysis

**A unified company that is capable of agile adjustment of its operating models to adapt new business models utilizing existing modular designs**
How to takeover a billion euro business in 6 months?
Case Wirral
Shell's Norwegian downstream company integration master plan

**Assessment**
- Assessment 2 weeks

**Solution design**
- Planning phase 1 month

**Implementation cycle**
- Program: Production environment
- Realization of projects
- Unit testing

**Final preparation and cut over**
- Go Live & Support
  - Final Preparation
  - Integration & acceptance testing

**Go Live**
- Design ready
- Solution ready
- Go-live start
- Go-live

**Timeline**
- Kick Off 25th, Mar
- 16\(^{th}\) of April 2015
- 30\(^{th}\) of Jul 2015
- 1\(^{st}\) of Oct 2015
End to End process with key systems
To-Be application landscape & responsibilities by project
Successful overnight go-live of

Over 400 retail sites

and

Direct sales business
2nd Transformation 2016->
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</tr>
<tr>
<td>2019</td>
<td>....</td>
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Background for the 2nd transformation

On going transformation to build a common core for the St1

Industry changes in the financial and payment industry

• Change financial business and regulatory environment with emergence of Fintechs
• Changing payment legislation with emergence of new digital (mobile) payment solutions

On going digitalization

• Future mobility with emerging mobile and online channels in retail and energy industries
• Bricks and clicks
• Connectivity and convergence: Connectivity spreading to our daily lives shaping our surrounding environment into connected living
Objectives

- Modify St1 finance & payment offering to respond to changes
- Implement mobile retail offering to respond to retail changes....
- Implement online channel and improved web pages

Respond to the changing environment....
Approach – add iteration

1. Understand where we are
   - Improvement and optimization needs of current way of working
   - Operational issues
   - Business owners and IT specialists
   - Prioritization

2. Establish where we want to go

3. Define how to get there
   - Gaps and implications
   - Plan and next steps

4. Iterate
   - Recheck, revise and maintain plans
Digital Transformation Change Approach

DRIVERS, REQUIREMENTS

DIGITAL AMBITION & BUSINESS STRATEGY

DEPENDENCY ANALYSIS (STRATEGY-BM-OM)

CAPABILITY CHANGE NEEDS

BUSINESS OUTCOMES TO CAPABILITY GAPS

PRIORITIZATION & CAPABILITY ROADMAP

TARGET ARCHITECTURE

TRANSFORMATION ROADMAP

As Is Business Models & Operating Model

Industry Analysis

Capability Change Needs

Business Outcomes to Capability Gaps

Prioritization & Capability Roadmap

Target Architecture

Transformation Roadmap

Business Change and Operation Improvement
Automated routine tasks and eliminating non-value adding tasks improve efficiency.

Self-service order management and visibility to order, delivery, and invoice history.

Economies of scale: Common systems -> Less development, maintenance & licenses.

Improved analytics based on efficient DW solution for assets & cash optimization.

Self-service order management and visibility to order, delivery & invoice history.

Online coupons for car wash, coffee, lunches...loyalty.

St1 finance institution for new payment and financing offering.

Digital ambition => digital strategy
## Strategy description for finance services and online & mobile channel

<table>
<thead>
<tr>
<th>Business Objective</th>
<th>Business Strategies</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve customer experience in retail and increase customer intimacy</td>
<td>• Improve the retail customer experience and streamline operations for the existing and new product offering</td>
<td>• Mobile and online car wash starting with Finland</td>
</tr>
<tr>
<td>Cost efficient operations</td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Mobile fueling starting with Finland</td>
</tr>
<tr>
<td>Create and adapt to payment industry disruption</td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Coupons (services, discounts, value etc) for mobile</td>
</tr>
<tr>
<td>Minimize the role of middle men in the payment processes and create cost competitiveness</td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Common St1 web site</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Online services for direct sales B2B and B2C customers</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
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</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Set up St1 Finance Services 2017</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Launch the first product (St1 MC w Apple Pay) Oct 2017 in Finland and Sweden</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Introduce additional offering to customers xxx</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Expand self service features for customers</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Capture x customers by xxx</td>
</tr>
<tr>
<td></td>
<td>• Build a new payment institution business to adapt and utilize the payment industry disruption</td>
<td>• Generic for new payment institution: Reach operative profit and cost break even point by xxx</td>
</tr>
</tbody>
</table>
Analyze the Dependencies:
Strategy- Business Model – Operating Model
Analysis case: New Business Model, “St1 Finance”

- St1 Finance Services: Finance services with payment account and payment method through E-2-E digital processes and fully mobile channel.
- Value proposition:
  - New payment method with credit in use in 3 minutes from app download
  - Mobile payments
  - Loyalty benefits for purchases at St1 and Shell sites
  - ....
### Example of dependency analysis outcomes

<table>
<thead>
<tr>
<th>Change</th>
<th>Effect to what:</th>
<th>What we need to do:</th>
</tr>
</thead>
</table>
| **Value proposition shift**                | Capabilities    | • Develop a digital platform to launch finance services enabling deeper levels of automation into the finance and payment processes to realize the targeted value proposition  
                                           |                 | • manage a new business ecosystem (not just energy providers but other finance and payment service providers).                                      |
| from providing energy and retail solutions to also providing finance services. |                 |                                                                                                                                                  |
| **An expanded finance and payment value proposition** | Customers       | • target new types of customers, namely those interested in e-2-e mobile and digital finance and payment services.  
                                           |                 | • Enable social media channels for target customers reach like FB.                                                                                     |
| **New future digital capabilities**         | Operating model | • a new setup and competencies to get people in the organization aligned to developing and delivering digital service rather than product.  
                                           |                 | • a new governance setup to manage new offering development in balance with the already ongoing offering development.                        |
Identified capability gaps

Business Capabilities
- Operate the new line of business
- Create business models
- Develop and deliver Nordic digital products
- Provide support for digital products
- Apply risk and compliance
- Deliver intelligence
- Build partnerships

Information and Technology
- Finance service account & payment method management
- Digital platform with
  - Mobile and online development environments
  - APIs (API Management)
  - Analytics, AI, Machine learning
  - IoT

Business People and Culture
- Talent with digital platform and business ecosystem experience

Business Ecosystem
- ...
Target architecture for St1 digital platform, enabler for:
Connecting People, Information, Processes and Things

Explorative, agile

Existing, improving

Customers

Ecosystems & Connections

Information w/ Intelligence

Things

IT Systems & Processes
St1 Strategic Roadmap

Outcomes:
- Mobile car wash FI
- Online car wash FI
- Mobile fueling FI
- St1 MC w Apple Pay FI, SE
- Common St1 web site
- Mobile fueling SE
- Common core Norway
- St1 Payment Institution
- Common core Finland
- Online for direct sales customers
- Common core Sweden
- Common core finalization
- Additional offering to finance customers

Capabilities:
- 2016
  - Mobile & Online development environments
  - Common core systems
- 2017
  - Finance system
  - End-End digital finance processes
  - Mobile fueling
- 2018
  - API Management
  - Common components
  - Advanced development tools
- 2019
  - AI
  - Machine learning
  - Low code development

Business:
- Develop and deliver Nordic digital products
- New business model development
- Operate the new line of business
- Provide digi support
- Build partnerships
- GDPR
- Apply risk and compliance
- Portfolio governance
- Deliver intelligence
- Utilize AI and Machine learning in operations
REALLY, has the 2\textsuperscript{nd} (Digital) Transformation really gone like that?

NO - Wisdom of what really needs to happen has been growing gradually and structure has been coming to place piece by piece

Common understanding is still maturing. Future will show....
Learnings Phase 1:

- Enterprise Architecture is highly useful for successful business transformation
  - Increased awareness of company’s business models, processes and systems
  - Shared understanding of where we are and of the needed change
  - Enable transformation planning & driving the change

Learnings Phase 2:

- Important to have a target for the digital development. That needs to be reflected in the strategy with defined targeted outcomes
- Important that business and IT have a common understanding of digitalization and related targets
- Implementing changes to company operating model to enable digitalization is very challenging
Thank You!