November 15, 2010

Prof. Dr. J. Strikwerda CMC
Director Nolan Norton Institute
Partner Nolan, Norton & Co.
hans.strikwerda@nolannorton.com
Professor of Organization & Change – Amsterdam Business School

INFORMATION:
GOVERNANCE & KEY RESOURCE
What is beyond Nolan’s S-curves?

Organizational Learning

- DP Era
  - Industrial Economy
    - Period of Traditional Principles
  - Transitional Economy
    - Period of Creative Destruction
  - Information Economy
    - Period of Transformed Enterprise
- Network Era
  - Integrated Enterprise / open (e-) business models
  - MDO
Why are there so many horror stories about failed or out-of-control ERP projects?

- Because many CEO’s, CFO’s and CIO’s, as well as consultancies, and even academics, still are trapped in industrial economy based paradigms on business, organization and management

“The worst thing a CEO can do is to hire a chief information officer (CIO) with the intention of delegating responsibility for information management to an expert. This is an abdication of essential powers because information management is inseparable from the essence of every managerial act.” Paul Strassmann 1994
Do successes exist? Yes ...

- IBM
- Nestlé
- ASML
- Wal-Mart
- Albert Heijn
- Sabic
- SVB
- ...

Observed benefits of enterprise systems / ERP:

- Higher strategic maneuverability
- Competitiveness through information dominance
- Competitiveness through business model innovation
- Higher value appropriation from the market
- Higher degree of sensing the customer
- Faster and more precise response to customers
- Higher degree of exploitation of synergies
- Better exploitation and development of (tacit) knowledge through resource mobilization
- Higher attractiveness to creative knowledge workers
- Lower agency costs
- Lower costs of the finance function
- Lower costs in modular back office processes
- Lower cost of capital, less capital tied up
- Lower costs of processes
- Convincing business case for IT-investments
Alignment trap 1:
ES/ERP-systems are configured on basis of the unit-organization, which economically is obsolete.
Alignment trap 2:
ERP-systems are based on accounting profit and subsequently defined management information whereas firms should be managed on basis of economic profit and management information defined by that

Management Information comprises:
- Financial and non-financial information
- Leading en lagging parameters
- External- and internal information
- Structured and non-structured data
- Discursive information and disinformation (+ frames to cope with - )

Information must be:
- Relevant but redundant
- Timely
- Trustworthy: individuals must understand where information comes from, from who; “ex-post data debriefing (feedback) closes the loop in the trust cycle”
- Accessible for all on the same team (= not used for internal power games)

Information must:
- Trigger the strategic development, innovation, exploration, learning processes
- Create a competitive strength
- Trigger timely adaptation and transformation, create discomfort
- Enable accountability, compliance
Alignment trap 3:
ERP-systems are based on budget-driven, bottom-up resource allocation as method for strategy execution, whereas modern strategy execution is based on validated cause-and-effect relations.

Bower’s (1970) bottom-up Resource Allocation Process has run into the wall (Bower et al. (2005):
• Budget gaming / politicking
• Too high information asymmetry
• Doesn’t allow for intangible assets
• Doesn’t facilitate synergies
• Doesn’t facilitate modern business models

Strategy execution (Kaplan & Norton 2008) is through:
• Strategic themes as cross unit accountable dimensions, funded by STRATEX
• Synergies are achieved planned & controlled through multidimensional accounting & control systems
• Time phased objective setting based on cause-and-effect relations and rolling forecasts
• Resource mobilization
Alignment trap 4:
ERP-systems are aimed at to be-in-control on level 1: *existence*, whereas to be in-control also requires capabilities of level 2: adaptation and level 3: transformation

.Control exists of three levels:*  

1. *Existence or being*, the problem of maintaining organization—even in the absence of external change—counter entropy = \( AO/IC \), ERM-COSO

2. *Experience or behavior*, the problem of adapting goal-directed processes to variation and change in external conditions \( \rightarrow \) *flexibility*

3. *Evolution or becoming*, the problem of reprogramming less successful goals and procedures while at the same time preserving more successful ones: *business transformation*

To be in-control requires the organization of all types of information:

1. Goal-information (mission, strategic intent, objective function)
2. Motivation- or axiological information
3. External information
   - Material information:  
     a. Discursive information
     b. Disinformation
   - Eidetic information
4. Instruction- or effect-information
5. Pragmatic information (= management information (=ICT))

Alignment trap 5:
ERP-systems mechanize processes defined by existing business models whereas modern competition is on innovation of business models, including the distribution of value created

Governance Logic:
- ownership, decision rights and equitable distribution of value created

Process Logic:
- process architecture, driven by capabilities of technology
Alignment trap 6: ERP-systems are based on information as a residual factor in the production function, whereas in modern business models information is an input in the production function

The Elements of a Successful Business Model
(Johnson, Christensen & Kagermann 2008)

Customer Value Proposition
• Target customer
• Job to be done (use value)
• Offering

Key Resources
• People
• Technology, products
• Equipment
• Information
• Channels
• Partnerships, alliances
• Brand

Profit Formula
• Revenue model
• Cost structure
• Margin model
• Resource velocity

Key Processes
• Processes
• Rules and metrics
• Norms
Organization culture is the collective programming of the mind: How ICT has become part of the problem of cultural change and innovation; ICT needs to be re-programmed

Information is required for empowerment (leadership) of the (front-line) worker → to create adaptability and agility of the firm, and to maximize information processing capabilities

- In a decentralized organization as many as possible members, on basis of:
  - Goal information + targets
  - Axiological information
  - External information
  - Effect-information
  - Pragmatic information
  - Fast feedback –control, panoptic control
  - Allocated decision rights
  - Resource mobilization

- ... can decide for themselves which of their alternative initiatives and decisions will contribute most to the performance of the firm, including externalities (Arrow, 1974) = to have sense & response to changing customer requirements = to have a best use of human capital

From the business-IT alignment trap to the transformation of the business

The business-alignment paradigm as in e.g. Applegate, L. M., Austin, R. D., & McFarlan, F. W. (2006). *Corporate Information Strategy and Management*

Therefore essential layers are missing in Weill & Ross’ concept of IT-governance: the entrepreneurial use of information.

<table>
<thead>
<tr>
<th>Information as strategic environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information as a resource</td>
</tr>
<tr>
<td>Information management / policy</td>
</tr>
</tbody>
</table>

**IT principles decisions**
High-level statements about how IT is used in the business

**IT architecture decisions**
Organizing logic for data, applications, and infrastructure captured in a set of policies, relationships, and technical choices to achieve desired business and technical standardization and integration

**IT infrastructure decisions**
Centrally coordinated, shared IT services that provide the foundation for the enterprise's IT capability

**Business applications needs**
Specifying the business need for purchased or internally developed IT applications

**IT investment and prioritization decisions**
Decisions about how much and where to invest in IT, including project approvals and justification techniques

Information Policy: typical constitutional decisions by the Executive Board required to create a multidimensional information space for the organization

1. The primary profit center is the customer  
   a) Other reportable dimensions and their parameters are decided on basis of strategy, causal relations, possible new behavior of customers and competitors and legal requirements  
   b) Performance is simultaneously reported on multiple dimensions

2. All customers are corporate customers, as are suppliers, and have one profile

3. There is one company wide (global) extended general ledger for all operations and entities, based on semantic standardization of the fields of the records as set by corporate accounting, this ledger records financial and non-financial data, external transactions, internal transactions, etc.

4. Customer data is corporate wide accessible, as is the data in the general ledger, except for some security restrictions (absence of information asymmetry)

5. All initiatives are to be based on integral business cases

6. Reporting of turnover and income (cost allocation) on each of the reportable dimensions and entities is by corporate accounting only (one trusted source for management information); no transfer prices

7. Contribution is recorded at the level of the individual creative knowledge worker, title moves with the individual, rewards are based on corporate performance
What is or should be the purpose of the information policy of a firm?

Expressed in Simons’ four levers of organization design

To provide for effective strategy execution and to trigger the timely change to new business models and their execution

Strategy and Structure

To assist front line workers in responding to new customer demand, that is profitable for the firm and makes the firm to adapt to operational changes in the market

Accountability and Adaptability

To provide incentives and feed-back that are rewarding both the individual and will maximize the value of the firm

Self-Interest and Mission Success

To create successful teams and effective self-coordination which produces actions that are profitable to the firm

Ladders and Rings