Enterprise Architecture = Architecting the Enterprise?

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Enterprise Architecture = Architecting the Enterprise?

Architects in the enterprise are often regarded as ivory tower residents who bestow their utopian plans upon project teams in the form of colorful diagrams that bear little to no resemblance to reality. The most suspicious in this group are often the “Enterprise Architects” who are perceived as being furthest from actual technical problems.

However, large-scale IT operation and transformation require transparency across hundreds or thousands of applications running on all sorts of middleware in data centers around the globe. The very enterprise architects are likely the only ones who stand a chance to bring transparency into such an environment and who can direct IT investments in the hundreds of millions of Euros towards modernization and run-cost reduction. This sounds a lot more exciting and valuable than drawing pictures!

This session takes a serious but light-hearted look at the role of enterprise architects in modern IT organizations.
We just write about software…
You have to go and debug it yourself!
The Enterprise Architect
The Purpose of Enterprise Architecture
Enterprise Architecture is the Glue between Business Architecture and IT Architecture
1. Understand the business strategy
2. Translate into an IT strategy
3. Create transparency
4. Define IT target picture
5. Define a roadmap
6. Harmonize and govern
7. Obtain feedback and refine
8. Coach and mentor
1) Understand the business and its strategy

- Growth areas
- Profitability
- Geographic expansion
- Geopolitical aspects
- Acquisitions and divestitures

“Architecting the business”

- Divisions / business lines
- Group level vs. divisions
- Reporting lines
- Matrix organization
- Hidden org chart / loyalties

“Reverse engineering the organization”

Most business domains are much more interesting and exciting than it may seem, even insurance!
1) Understand the perceived role of IT

<table>
<thead>
<tr>
<th>Focus on</th>
<th>Cost Center</th>
<th>Asset</th>
<th>Partner</th>
<th>Enabler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical CIO Reporting line</td>
<td>Cost</td>
<td>Return on Investment</td>
<td>Business Value</td>
<td>Speed &amp; Innovation</td>
</tr>
<tr>
<td>Common Strategy</td>
<td>CFO</td>
<td>COO</td>
<td>CDO</td>
<td>CEO</td>
</tr>
<tr>
<td>Levers</td>
<td>Outsource IT</td>
<td>Harmonize / Rationalize</td>
<td>Insource IT</td>
<td>IT = business</td>
</tr>
<tr>
<td></td>
<td>Cost Cutting</td>
<td>Economies of Scale</td>
<td></td>
<td>Economies of Speed</td>
</tr>
</tbody>
</table>
2) Translate Business Strategy into IT Strategy

Strategy is…

- ...not reality
- ...defining what you won’t do
- ...not the vendor’s product road map

“Better products at lower price” is not a strategy. That’s wishful thinking.
2) Translate Business Strategy into IT Strategy

<table>
<thead>
<tr>
<th>Business Process Standardization</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coordination</strong></td>
<td></td>
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<tr>
<td>- Unique business units with a need to know each other’s transactions</td>
<td></td>
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<tr>
<td>- Examples: Merrill Lynch, Toyota Motor Marketing Europe, MetLife</td>
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<td></td>
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<tr>
<td>- Key IT capability: access to shared data, through standard technology interfaces</td>
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<tr>
<td><strong>Unification</strong></td>
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<tr>
<td>- Single business with global process standards and global data access</td>
<td></td>
<td></td>
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<tr>
<td>- Examples: Delta Air Lines, Dow Chemical, Pepsi Americas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Key IT capability: enterprise systems reinforcing standard processes and providing global data access</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Process Integration</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diversification</strong></td>
<td></td>
<td></td>
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<tr>
<td>- Independent business units with different customers and expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Examples: Johnson &amp; Johnson, Carlson Companies, GE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Key IT capability: provide economies of scale without limiting independence</td>
<td></td>
<td></td>
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<tr>
<td><strong>Replication</strong></td>
<td></td>
<td></td>
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<tr>
<td>- Independent but similar business units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Examples: Marriott, CEMEX, ING DIRECT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Key IT capability: provide standard infrastructure and application components for global efficiencies</td>
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</tbody>
</table>
3) Create transparency

“Reality”
A good target picture is simple and convincing to a diverse audience.

**Application Silos**
- Duplication, high cost
- Lack of integration
- Slow release cycles

**Unified run-time and tool chain**
- De-duplication
- Resilient platform
- Integration through APIs

**Cloud Service Architecture**
- Reduced time to production
- Reuse through service APIs
- Hybrid cloud portability
6) Harmonize and govern

- Publish common principles to be considered by projects
- Track projects through direct involvement
- Have a review / decision
- Ensure the review board brings value to projects
- Have an escalation path
7) Obtain feedback and refine

- It won’t happen the way you planned.
- Stay connected to reality.
- You may not like what you see, but it’s a lot better than not knowing.
- There is no “7-step plan” for success. You must course correct.
8) Coach and mentor

“Harmonize your infrastructure you must”

- You’ll need support
- You won’t have enough people with the right skills
- You’ll learn a lot by helping other teams
- Teach new concepts and ways of working
- Publish technical strategy papers
- Establish qualification programs
Thinking like an Enterprise Architect

Connections
Abstractions
Decisions
Architecture is about Selling Options

\[
C(S_t, t) = N(d_1)S_t - N(d_2)Ke^{-r(T-t)}
\]

\[
d_1 = \frac{1}{\sigma \sqrt{T-t}} \left[ \ln \left( \frac{S_t}{K} \right) + \left( r + \frac{\sigma^2}{2} \right) (T-t) \right]
\]

\[
d_2 = d_1 - \sigma \sqrt{T-t}
\]
Enterprise Architecture? Just a matter of viewpoints!

1. Connections
   a. With the governance processes => understand what your levers are
   b. Across the architectural layers => strategy, business operating model, application, data, infrastructure. Here Ross comes handy for the highest level
   c. People and company's available knowledge => there is probably a lot around but siloed

2. Abstraction
   a. Models
   b. Each model needs to support multiple viewpoints: business and IT to assure we are talking about the same thing => enterprise ubiquitous language! Connection with DDD!

3. Decisions
   a. 'learn the art and put it apart' - italian expression. Frameworks are a mean not the goal
   b. EA as GPS navigator (pics to support): evaluate implications on your models: cost of change is nothing
   c. Validate the decisions across all layers using your connections: leave the tower to validate the decisions and collect feedback
Connections
Connections between:

Layers
- Strategy
- Business
- Applications
- Data
- Infrastructure

Alignment

Systems

Integration

Functions
- Project Ptf Mgmt
- Risk Mgmt
- Enterprise Architecture
- Finance
- Service Management
- Procurement

Coordination
No one cares about your architecture...

But they do care about the properties your architecture gives the system!
Abstraction
Abstraction
To find the right representation, you need to know what question you are looking to answer.
An Enterprise Architecture Model
Decisions

SKYLINE TRAIL

Loughry Woods Tr.  1.6 mi
Summit Rock       2.2 mi
Castle Rock Parking 3.1 mi
Indian Rock        3.2 mi
Sanborn Trail      4.9 mi

SARATOGA GAP TRAIL

Charcoal Road      1.9 mi
Long Ridge         2.2 mi
Table Mountain     3.7 mi
Page Mill Road     7.6 mi
Decisions
Is this architecture?

Would you have paid an architect for this?
What about now?

- Steep angle reduces snow load
- Overhang protects windows
“<x> Is a priority, so we chose design <y> and accepted downside <z>. We also did <*> to minimize it.”
Progressively build your enterprise view...accept fuzzy areas
Focus on concrete problems to solve

- Focus on measurable outcomes
- Divide and Conquer
- Frameworks are a useful tool, but not the goal
Much of it is common sense.

Many people get lost in the complexity and scope of it or become enamored with frameworks.

Enterprise Architecture is not black magic.
Good Architecture is about combining multiple viewpoints.

An interesting career as architect is also about combining multiple viewpoints.

There’s enormous demand for enterprise architects who achieve measurable results.
Thank You!

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www.linkedin.com/in/ghohpe

leanpub.com/37things

37 Things One Architect Knows About IT Transformation

A Chief Architect’s Journey

Gregor Hohpe