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Strategic Decision Making
by the CIO using Dragon1
Enterprise Architecture Visualizations

13 Architecture
Visualization Principles

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For more examples visit:

v1.1f

- Introducing...

  - Mark Paauwe

  - Dragon1 open EA Method

  - Demo: Dragon1 as EA Tool

- 13 Architecture Visualization Principles

Request your Architecture Visualization cheat-sheet here: info@dragon1.com

Download this presentation on http://www.dragon1.com

www.dragon1.com

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Introducing Mark Paauwe

Mark Paauwe, 44

Married, daughter of 8, living in the Netherlands

Studies of Information Science and Business Administration

Thought leader Visual Enterprise Architecture

Chief Technical Officer of The Dragon1 Software Company

Founder of Dragon1, the open EA Method in 2002

Creator of the Dragon1 Collaboration Platform (http://www.dragon1.com)

PhD/Research in 2 areas: Architecture Visualization and Architecture
Principles (Prof H.A. Proper / Tudor Institute / Radboud University)

Since 2001 small business owner. Former enterprise architect at consultancy
firms.

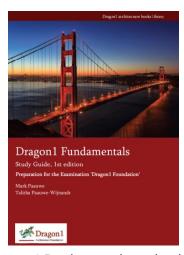Dragon1

Introducing Dragon1: a new open EA method

Dragon1 is an open EA method for enabling business change and controlled successful enterprise transformation with Visual Enterprise Architecture in the boardroom.

Dragon1 has a formal and very visual EA Modeling Language (150+ symbols and growing). Dragon1 as open EA method has a Wiki, Books, Supporting Materials and Training + Certification available.

There are user groups online at www.dragon1.com (EA tool User Community) and on LinkedIn and there are monthly Dragon1 knowledge evenings in various countries.

For more information visit: www.dragon1.com

Dragon1 Fundamentals textbook
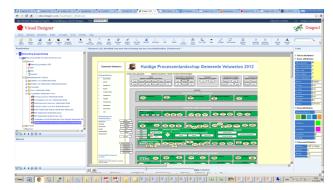
Dragon1 Foundation training

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Introducing the collaboration platform: **dragon1.com**

dragon1.com is an Enterprise Collaboration Platform for designing concepts, innovations and business models

dragon1.com is a suite of web applications

- Resource Center
- Architecture Repository
- Visual Designer
- Models Atlas
- Catalogs
- Enterprise Search
- Analytics & Dashboard
- Data Visualization
- Project Management
- ePortfolio & public business profiles

For more information visit: www.dragon1.com

Screenshot of Dragon1 in the Browser viewing an A0-sized processes-poster

Dragon1 works in:
- Internet Explorer
- Google Chrome
- Firefox
- Safari (iPad)

Dragon1 works on:
- Smartphone
- Tablet PC
- Laptop
- desktop

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Profiling the CIO – Some aspects

- Open To know of trends

- Have an overview of the companies IT

- Understand the strategic business issues

- Have notion of impact of solutions

- Hate technical models & difficult diagrams

- Being thorough

- To Guide

- Willing to take drastic decisions in seconds...

- Wants to be surrounded by people helping in these situations
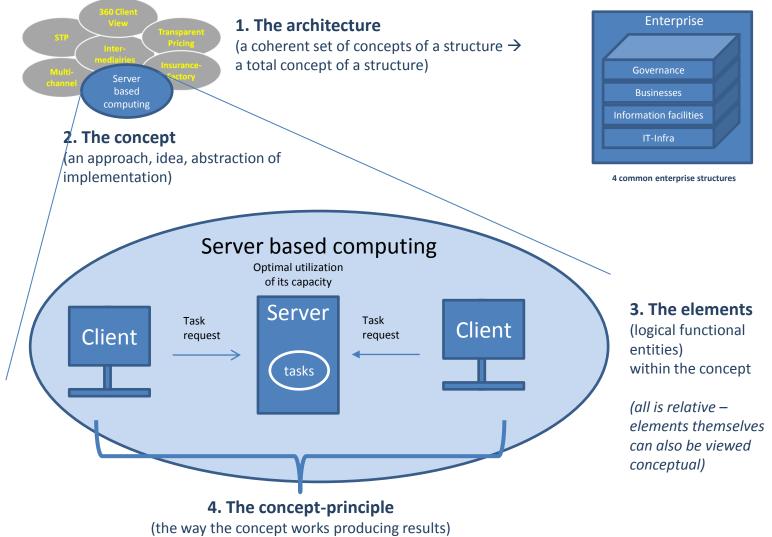
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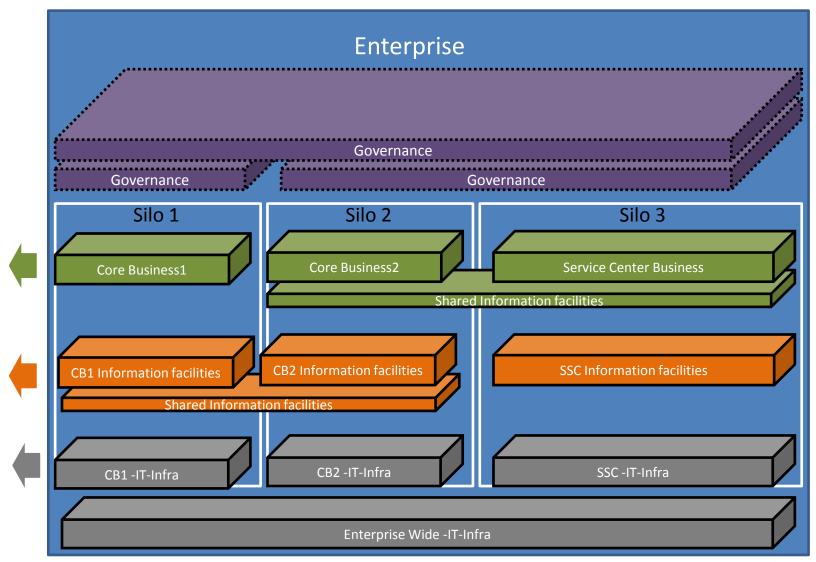# For starters: What is Visual Enterprise Architecture according to Dragon1?

- Open innovative and effective way of dealing with EA
- Bridging the gap between **strategy** and **business change**
- Bringing the added value of EA into the boardroom
- Delivering total concept design & decision supporting visualizations (management report views)

- New theoretic paradigm for Visual Enterprise Architecture
  - *Architecture* = a special total concept of a structure, a coherent set of concepts
  - *Structure* = a system with a constructive, operative and decorative dimension
  - *Concept* = an approach, way of working, idea, abstraction of an implementation
  - *Principle* = the enforced or managed way an entity works producing results
  - *Architect* = creative designer of total concepts & supervisor of realization of structures.
  - *Visualize your Total Concept Designs* = use sketches, drawings, (*not diagrams* ➜ *because that is engineering!*) and photographic images to visualize the concepts understandable.
  - *Management Report Views* = make every architecture visualization something to decide upon
  - +500 other defined terms

- Read it again!
  This has a lot of impact on mainstream EA

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Relationship between structure, architecture, concepts, elements and principles in Dragon1 in a picture

360 Client View

STP

Transparent Pricing

Inter-mediairies

Insurance-Factory

Multi-channel

Server based computing

1. The architecture
(a coherent set of concepts of a structure →
a total concept of a structure)

Enterprise

Governance

Businesses

Information facilities

IT-Infra

4 common enterprise structures

2. The concept
(an approach, idea, abstraction of
implementation)

Server based computing

Optimal utilization
of its capacity

Client

Task request

Server

tasks

Task request

Client

3. The elements
(logical functional
entities)
within the concept

*(all is relative –
elements themselves
can also be viewed
conceptual)*

4. The concept-principle
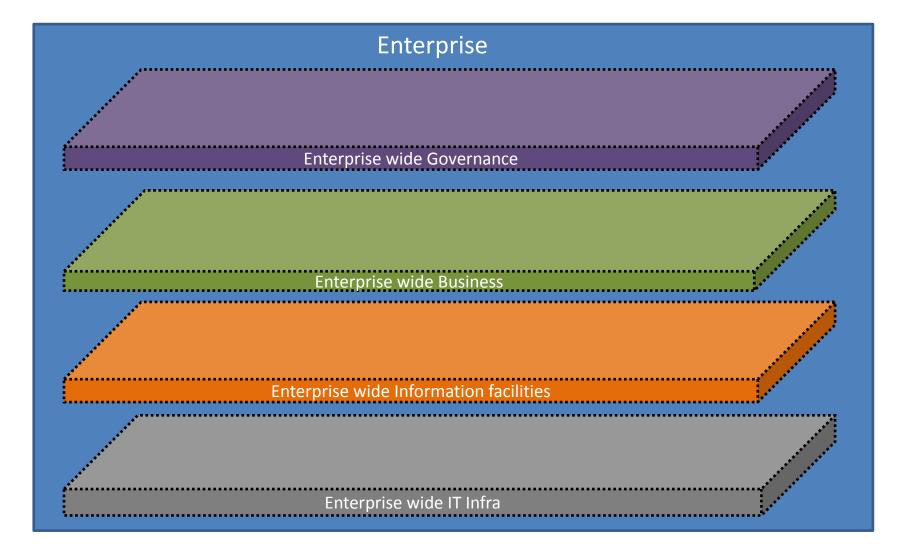(the way the concept works producing results)

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A typical enterprise, as a structure has internal structures like this
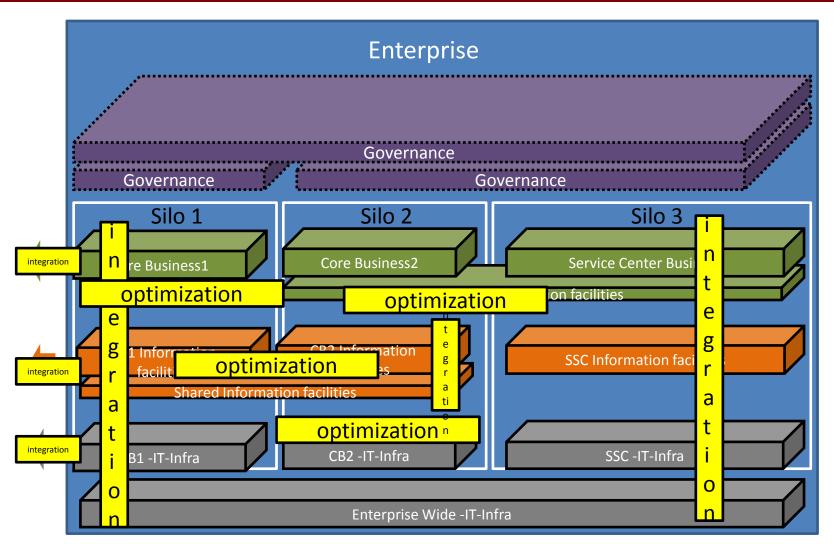
A typical enterprise comes nowhere near this...
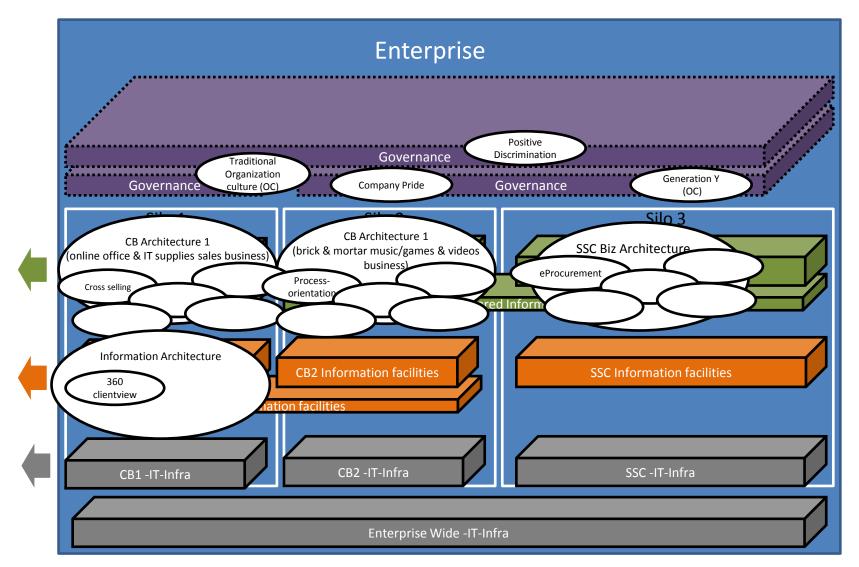## It is not structured like this…

Enterprise

Enterprise wide Governance

Enterprise wide Business

Enterprise wide Information facilities

Enterprise wide IT Infra

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Innovation, evolution and projects cause this:
A suboptimal structuring (de-standardized) of the enterprise

Enterprise

Governance

Governance

Governance

Silo 1

Silo 2

Silo 3

integration

Core Business1

Core Business2

Service Center Busi...

integration

optimization

optimization

...ion facilities

integration

1 Information facilit...

CB2 Information ...es

SSC Information faci...s

optimization

integration

Shared Information facilities

optimization

B1 -IT-Infra

CB2 -IT-Infra

SSC -IT-Infra

integration

Enterprise Wide -IT-Infra

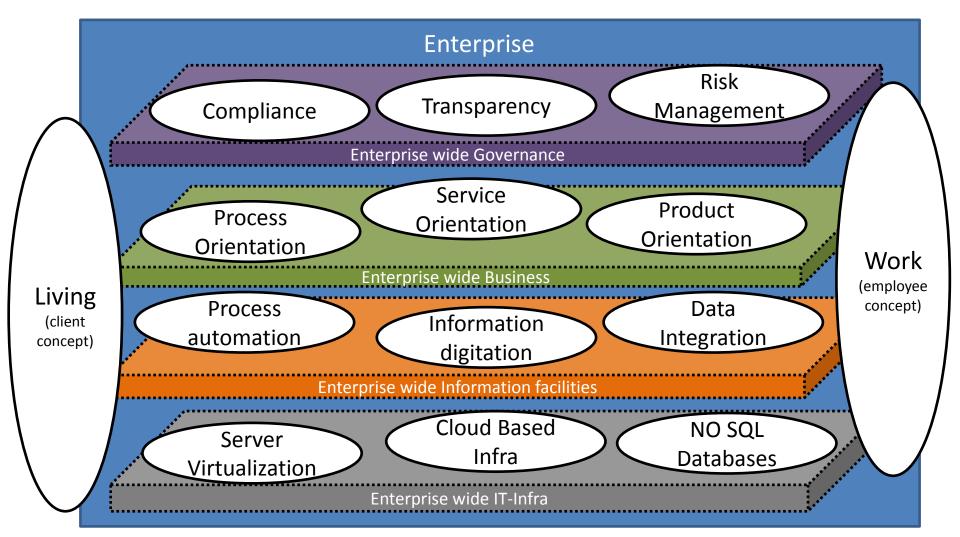But in total degeneration: sub optimization, complexity increase!

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The architecture of the enterprise could be this (total concepts of specific business, information & technical concepts)

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So what would be enterprise wide generic/pure theoretical concepts in the structures?

Enterprise

Living (client concept)

Work (employee concept)

Compliance • Transparency • Risk Management
Enterprise wide Governance

Process Orientation • Service Orientation • Product Orientation
Enterprise wide Business

Process automation • Information digitation • Data Integration
Enterprise wide Information facilities

Server Virtualization • Cloud Based Infra • NO SQL Databases
Enterprise wide IT-Infra

These would be the enterprise architectural concepts

Architecture Principles are...

Architecture Principles are ...

- the principles (way of working + results) of concepts
- that are valid structure-wide

- Example of a common business architecture principle
  - **By always** treating clients rights, giving them what they deserve and pay for, they will come back and buy more

- Example of a common information architecture principle
  - **By always** and only storing data once in the production environment, **enforced by** continuous monitoring & management, **it is ensured that** inconsistent versions of that data are prevented to ever exist **so with that** quality of data and thus de services depending on them is increased

- Example of a common technical architecture principle
  - By only using proven equipment that is compliant to open standards we will prevent having integration problems at a later stage thus keeping IT for the business scalable at wish.
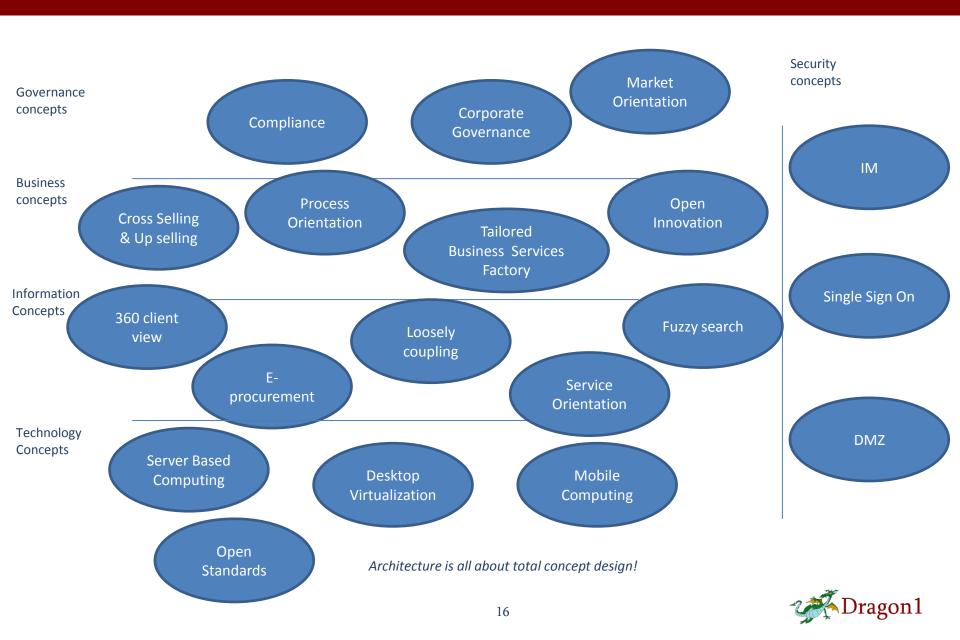
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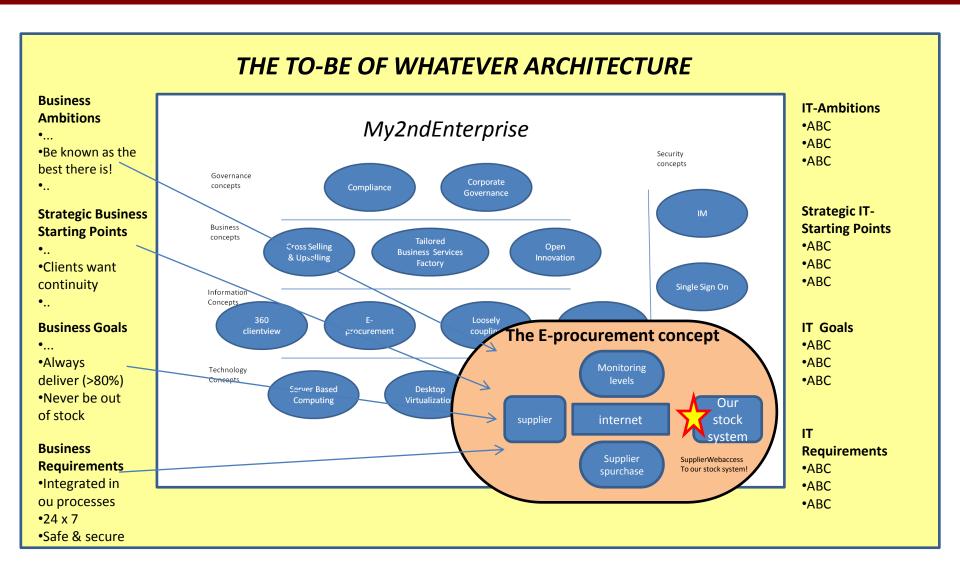# Give Context to the visualization & use concepts

- Do NOT tell how wonderful architecture is. They know!

- But show:

- **What** is wrong

- **Why** it is wrong
  (because of current goals & requirements)

- **How** to make it right
  (not in detail, but with the principle / pattern of the concept –
  how well is the concept implemented?)

- In order to get a decision from the CIO based on
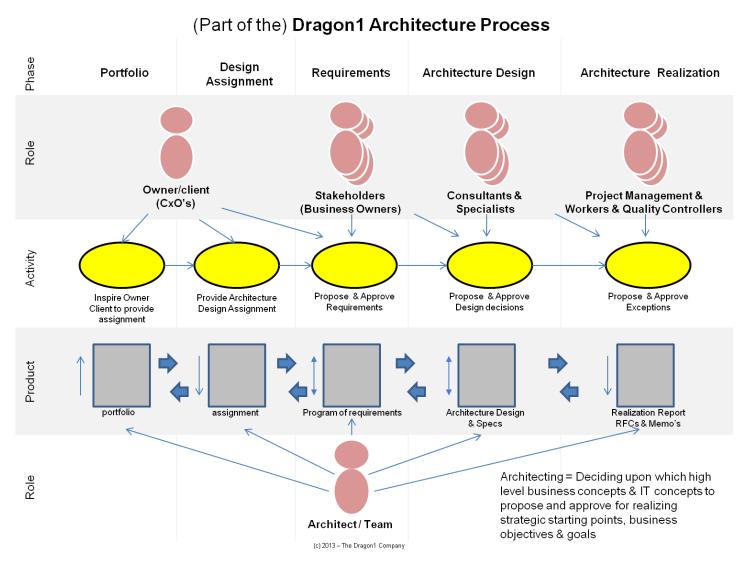 your visualization

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What are example / common high-level concepts?

Governance concepts

Business concepts

Information Concepts

Technology Concepts

Security concepts

- Compliance
- Corporate Governance
- Market Orientation
- IM
- Cross Selling & Up selling
- Process Orientation
- Tailored Business Services Factory
- Open Innovation
- Single Sign On
- 360 client view
- Loosely coupling
- Fuzzy search
- E-procurement
- Service Orientation
- DMZ
- Server Based Computing
- Desktop Virtualization
- Mobile Computing
- Open Standards

Architecture is all about total concept design!

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And now give them context and explode the view of the principle of 1 concepts to make it easy for the CIO to decide for them!

THE TO-BE OF WHATEVER ARCHITECTURE

Business Ambitions
•...
•Be known as the best there is!
•..

Strategic Business Starting Points
•..
•Clients want continuity
•..

Business Goals
•...
•Always deliver (>80%)
•Never be out of stock

Business Requirements
•Integrated in ou processes
•24 x 7
•Safe & secure

My2ndEnterprise

Governance concepts

Compliance

Corporate Governance

Business concepts

Cross Selling & Upselling

Tailored Business Services Factory

Open Innovation

Information Concepts

360 clientview

E-procurement

Loosely coupling

Technology Concepts

Server Based Computing

Desktop Virtualization

Security concepts

IM

Single Sign On

The E-procurement concept

Monitoring levels

supplier

internet

Our stock system

Supplier spurchase

SupplierWebaccess To our stock system!

IT-Ambitions
•ABC
•ABC
•ABC

Strategic IT-Starting Points
•ABC
•ABC
•ABC

IT Goals
•ABC
•ABC
•ABC

IT Requirements
•ABC
•ABC
•ABC

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(Part of the) **Dragon1 Architecture Process**

These 13 Architecture Visualization
Principles are denied
almost every day by any architect.

But when respected
they add so much value
to enterprise architecture.

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By

1. ADDRESSING COMPLEXITY...
2. REPORTING STATUS...
3. GIVING CONTEXT...
4. POSITIONING THE PROCESS ...
5. ORDERING STAKEHOLDERS...
6. INTEGRATING VISIONS...
7. COMBINING CONFLICTING REQS

8. SCOPING SOLUTIONS...
9. USING LINESTYLES...
10. USING DYNAMICS IN SITUATIONS
11. SHOWING THE TOTALCONCEPT
12. SHOWING THE REAL PRINCIPLES
13. PUBLISHING IN A DESIGN BOOK
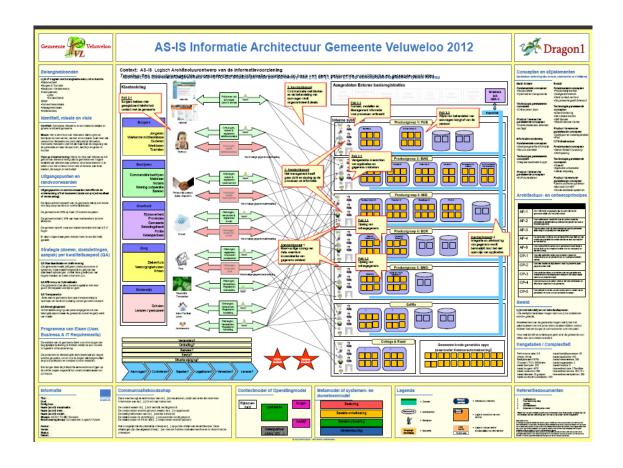
You will...

Visualize the high-level concepts principles (way of working + results), in order to facilitate or ease decision making!

Complexity, Redundancy, Integration, etc....

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You won't get any decisions taking with this picture!

You need to show the:

WHAT

WHY

And

HOW

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HOW

WHAT

WHY

(the principle/pattern
of the CCC-solution concept)
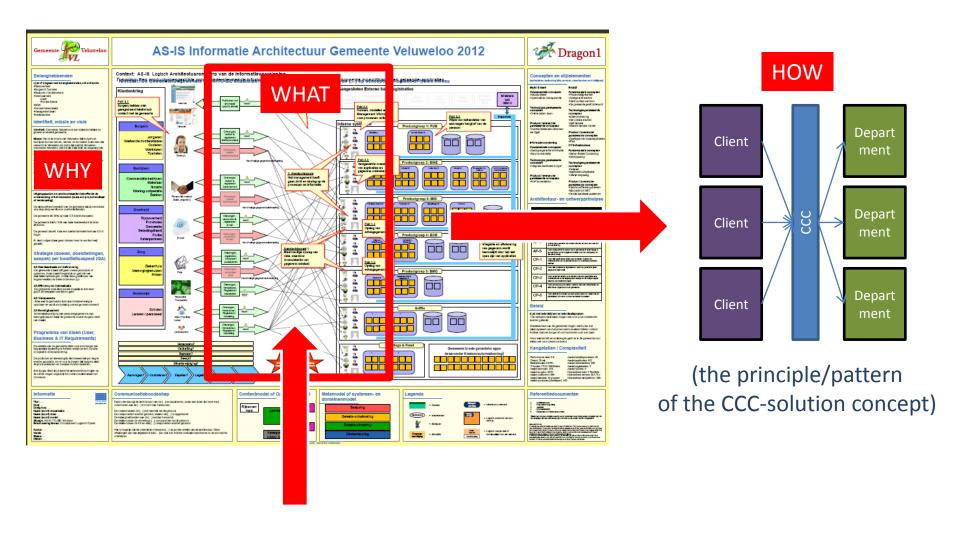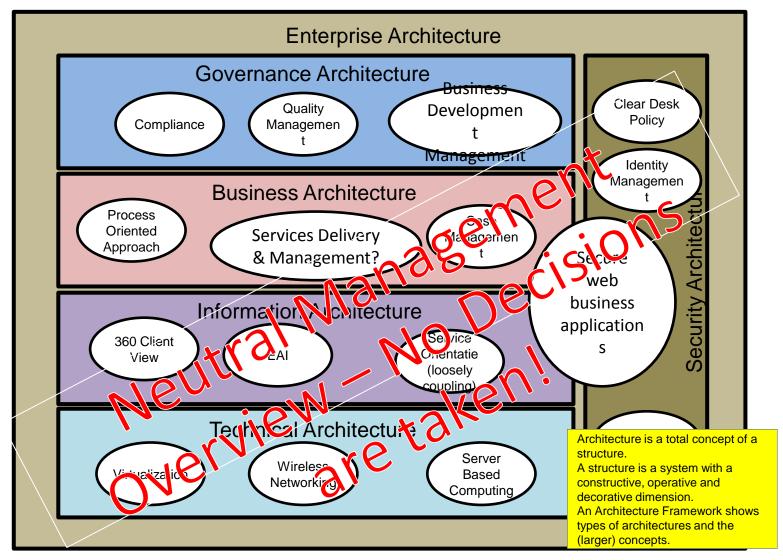
Put the focus on the pattern of the complexity-concept
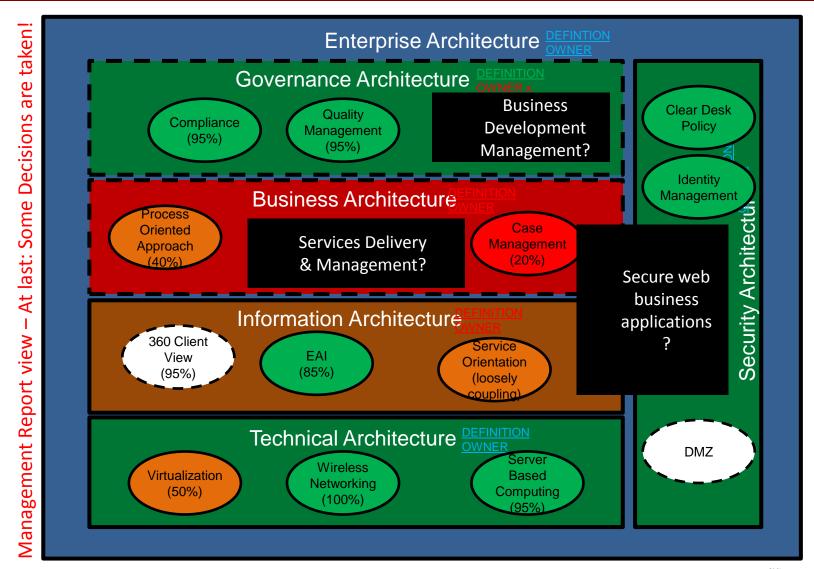
2. AS-IS Enterprise Architecture Framework 20XX Organization XYZ

Management Report view – At last: Some Decisions are taken!

Enterprise Architecture DEFINTION OWNER

Governance Architecture DEFINITION OWNER x

- Compliance (95%)
- Quality Management (95%)
- Business Development Management?

Business Architecture DEFINITION OWNER

- Process Oriented Approach (40%)
- Services Delivery & Management?
- Case Management (20%)

Information Architecture DEFINITION OWNER

- 360 Client View (95%)
- EAI (85%)
- Service Orientation (loosely coupling)
- Secure web business applications?

Technical Architecture DEFINITION OWNER

- Virtualization (50%)
- Wireless Networking (100%)
- Server Based Computing (95%)

Security Architecture

- Clear Desk Policy
- Identity Management
- DMZ

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3. Relating strategic starting points and concepts for the CIO to decide! – this is what you put on an architecture poster!

Every concept needs to be related to starting points, business goals or requirements for justification

Stakeholders
1.
2.
3.

Identity, Culture, Mission, Vision on Themes

Strategic Starting Points
1.
2.
3.

Business Goals
1.
2.
3.

An Architect (the creative designer of total concepts) may only propose a concept to be used in an architecture to the owner-client, if best practices or Proof of concepts are known and if costs and time of application of the concept are known.

Enterprise Architecture

Governance Architecture
Compliance
Quality Management

Business Architecture
Process Oriented Approach
Case Management

Information Architecture
360 Client View
EAI
Service Orientatie (loosely coupling)

Technical Architecture
Virtualization
Wireless Networking
Server Based Computing

Security Architecture
Clear Desk Policy
Identity Management
DMZ

This is an Architecture ➔ A total concept

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4. Where is architecture?
What impact does it have / may it have?

Strategy Process

Architecture Process

Project Management Process

The gray areas...

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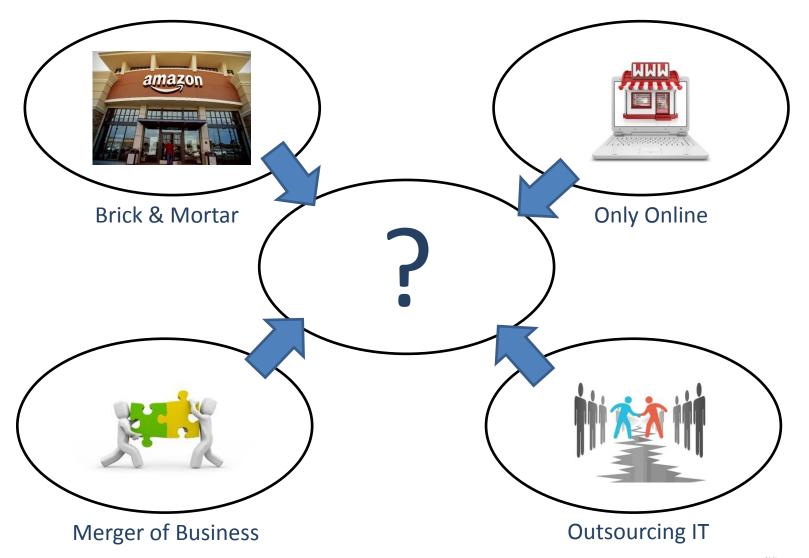
5. Who comes first with requirements?

6. A common strategy-view or not of the Board!

Brick & Mortar

Only Online

?

Merger of Business

Outsourcing IT

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Enterprise Architectuur Raamwerk

A. Pretty Meaningless

Self Service Sales

B. Nice but... what is the impact?

Online Self-Service Center

▶ View Demo

C. Understandable & Decidable

- Visualize principles: the way things work + results -

1. A customer selects the goods themselves

No service-staff is needed restricting opening hours

2. A customer purchases the goods themselves

No sales-staff is needed restricting transaction volume

3. A customer is stimulated to act in the right way

Automated monitoring and enforcement is needed. We still are human!

4. Result: The company sells more using less resources!

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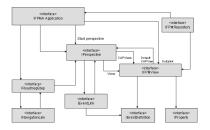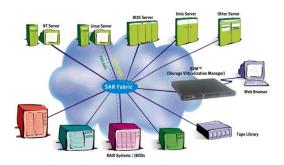
12. Three ways to visualize High Level Business Concepts and IT Concepts

A. Pretty Meaningless

Storage Virtualization

B. Nice but...
hard to understand,
and what is the impact?

Many faces of virtualization – Various Locations

C. Understandable & Decidable

- Visualize principles: the way things work + results -

1. A person or systems request storage capacity from storage pool manager

| A Requestor (man or system) | → A request for storage capacity | A Storage pool manager (software driver) |
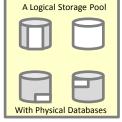
2. The storage request handler looks for capacity

| A Storage pool manager (software driver) | → Looks for storage spaces in storage areas | A Logical Storage Pool ... With Physical Databases |

3. The requestor gets the available capacity in a logical database
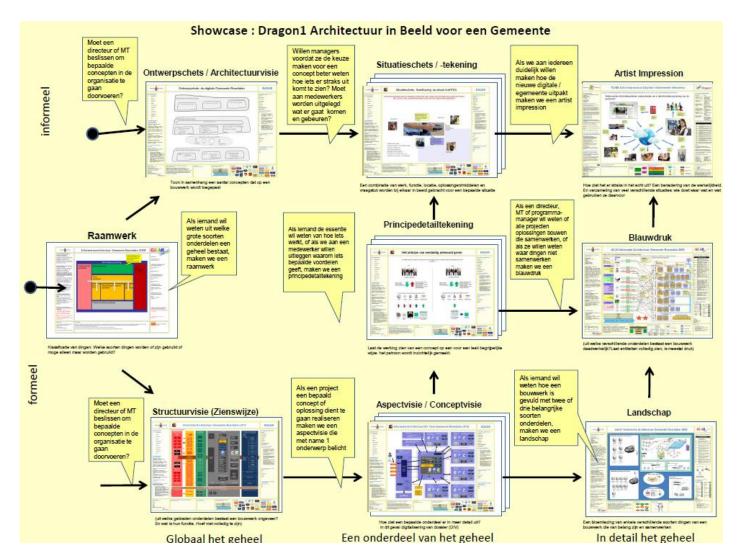
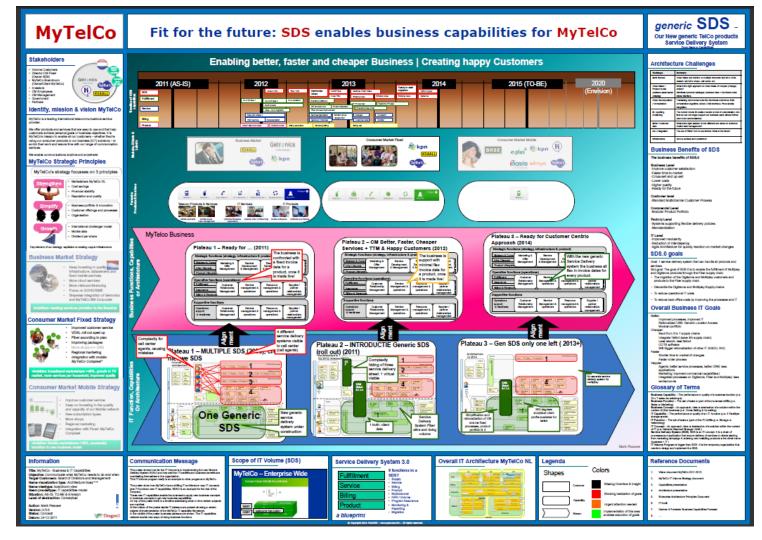| A Requestor (man or system) | ← | A Storage pool manager (software driver) |

4. Result: The company uses resources more optimally preventing buying new.

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Showcase : Dragon1 Architectuur in Beeld voor een Gemeente

When, Why and How to create this Strategic Roadmap?

- •Show Capabilities
- •Show Time
- •Show Money

A list of 13 important Architecture Visualization Principles to get more out of Enterprise Architecture

1. **ADDRESSING COMPLEXITY WILL...:** Often architecture visualizations do not address complexity, what is wrong, etc.... They don't visualize something to decide upon. Make visualizations worth making, knowing and looking at. The current so called correct situation is hardly of any meaning.

2. **REPORTING STATUS MAKES...:** Report status and progress and issues and solutions using management report view: architecture posters with progress and status information. Visualize status of situation using signal colors.

3. **GIVING CONTEXT BRINGS...:** Give context to your visualizations to make deciding by the board much more easier. Related strategic information to design parts. Add also other contextual information using an Architecture View Layout.

4. **PROCESS MODELLING & POSITIONING EXPLAINS...:** Visualize the design & realization process using a storyboard placing architecture in between strategy, port mgt and policy + frameworks. Choose standards and methods and stick to them.

5. **ORDERING STAKEHOLDERS IN RINGS MAKES...:** Visualize the uncertainty about stakeholders order/power using a...?

6. **INTEGRATION OF VISIONS RESULTS IN...:** Visualize the visions stakeholders have of the integral solution using a...?

7. **COMBINING CONFLICTS REQUIREMENTS WILL...:** Visualize the conflicting requirement stakeholder have using a...?

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A list of 13 important Architecture Visualization Principles to get more out of Enterprise Architecture

8. **COMBINING CONFLICTS REQUIREMENTS WILL...: Visualize** the conflicting requirement stakeholder have using a...?

9. **SCOPING SOLUTIONS VISUALLY MAKES...: Visualize** the scope-creep of the integral solution using a...?

10. **USING LINE STYLES WILL..: Visualize** past, present and future with different line styles.

11. **VISUALIZING DYNAMICS BRINGS...: Visualize** dynamics and situation more than static structures: use photo's of situations. Do not draw a bike as a architect. It takes all the fun out of it.

12. **VISUALIZING THE TOTAL CONCEPT WILL...: Visualize** architecture as total concept using a....?

13. **VISUALIZING REAL PRINCIPLES TO...:** Visualize the way concepts work with principle drawings. Have the board take decisions using these visualizations.

14. **PUBLISHING ARCHITECTURE IN A DESIGN BOOK WILL...:** Convince the board for your architecture vision using a Glossy A3-sized Design Book.

NO Worries, these principles are all explained in the textbook and wiki!

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Architecture is the total concept for design & realization of a structure

The Case

An insurance company wants to unfold an digital intermediary strategy.

The Architects come up with detailed IT-architecture documents, making no sense to the board, so they start managing the program by exception.

The Principle

Architecture as strict conceptual design makes architecture less fuzzy

Always sketch the architecture of a system as the conceptual design and realization of a system. This architecture vision drawing makes the board decide issues upon it. It relates concepts to strategic starting points.

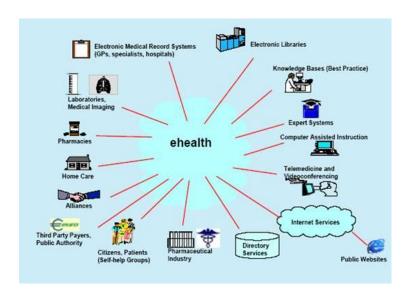Example Architecture Vision / Design Sketch of the Total concept

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Enterprise Architecture is a Design Science

The Case

A hospital wants to implement eHealth as an integral solution in the organization.

But gets stuck in politics, power, changing requirements, complexity and process & IT integration issues.
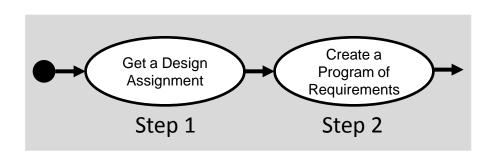

The Principle

Applying Enterprise Architecture as Design Science makes sure it adds value to enterprise transformation.

Step 1 in Design is to always get an architecture design assignment first of the owner-client and do a visual stakeholder analysis.

Step 2 in Design is to always create as architect a Program of Requirements, by inspiring stakeholders for requirements using pictures.
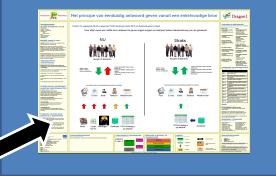
Why do principle-visualizations work so well for decision taking?

These are comprehensible & understandable & decidable within seconds

These take years of study….

Formal Meta Model

Formal Model

Role Dependent View

Informal Visualization (of the concept-principle or solution-principle related to aims, objectives & goals + impact shown)

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AGILE STAKEHOLDER CONTRIBUTION & DECISIONS USING VISUALIZATIONS

A list of principles another way around to get more out of Enterprise Architecture

1. Enterprise Architecture as Design Science adds value to enterprise transformation - View enterprise architecture as a design science & realization for enterprise transformation, so ... Be sure to have architect capable of designing and helping the realization.

2. ARCHITECTURE AS STRICT CONCEPTUAL DESIGN makes architecture less fuzzy - View the architecture of a system as the conceptual design and realization of a system.

3. Dear CIO, your architect is waiting for a design assignment (even if he doesn't know it).

4. Use visualizations to get the stakeholder requirements of integral business IT solutions right.

5. ARCHITECTURE VISUALIZATION AS MANAGEMENT REPORT VIEWS – Creating visualizations as management reports makes them much more usable as decision supporting systems.

6. VISUAL ENTERPRISE ARCHITECTURE AS VISUAL RISK MANAGEMENT – Use Enterprise Architecture for Visual Risk Management in strategic programs or enterprise transformation. CFO's and auditors will love it and USE it!

7. Use Black Spots Views to report what is not in control - Always report/visualize what you and people know & don't know.

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A list of principles another way around to get more out of Enterprise Architecture

8. Improve continuity with a justified Business-IT Dependency impact view.

9. Manage programs with an Architecture Framework - Make a distinction between architecture framework and architecture vision, so....?

10. Always ask an architect for a principle drawing before deciding - Before choosing a concept, always create a principle drawing, so....?

11. Save time and money in every project with a enterprise+solution blueprint

12. Unlock adaptivity with an Enterprise Architecture Baseline. Where is yours?

13. Don't be afraid to use Informal visualizations such Artist Impressions at your CxO-meetings. Where were you last time?

NO Worries, these principles are all explained in the textbook and wiki!

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The End

- Thank you for attending this presentation

- Maybe I have inspired you to respect the presented principles and start visualizing your own principles

- The new open EA Method for Visual Enterprise Architecture helps solving EA-issues in less time, people, budget and at a higher quality than most other methods do.

- Want to know more about Visual Enterprise Architecture?

Start your journey in Architecture Visualization at

<center>

http://www.dragon1.com

mark.paauwe@dragon1.com

</center>

www.dragon1.com

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Some Companies I have visited for data on principles or I have information on about their principles

Rabobank	UK Defense	Hogeschool Avans
Tatasteel	UWV	Hogeschool Windesheim
Kadaster	EC	Hogeschool Wageningen
Gemeente Maastricht	NATO	Universteit van Wageningen
Gemeente Utrecht	Toyoto	VR Rijnijsselland
Essent	UK Government	Etc…
OHRA	KLM	
TenneT	Bank Santander	*(in total I have data on*
Fortis ASR	Provincie Gelderland	*principles of over 250*
DSM	Gemeente Noordwijk	*companies!)*
Gemeente Roerdalen	-S heerenloo	
Ziekenhuis Gelderse Vallei	C1000 / Schuitema	
UMCG	NS	
RWS	Gemeente Amsterdam	
Ministerie van ELI	Ahold	
ABN AMRO	BAM	
ING	Woonnet Rijnmond	
ICTU	Woning Corporaties	
Philips	Vidomes	
Siemens	OHIO State (US)	

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It is always of added value

to visually communicate
impact, results and risks
of changes and decisions
to CxOs

because you can using Dragon1

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