ArchiMate®: Adding value to TOGAF™

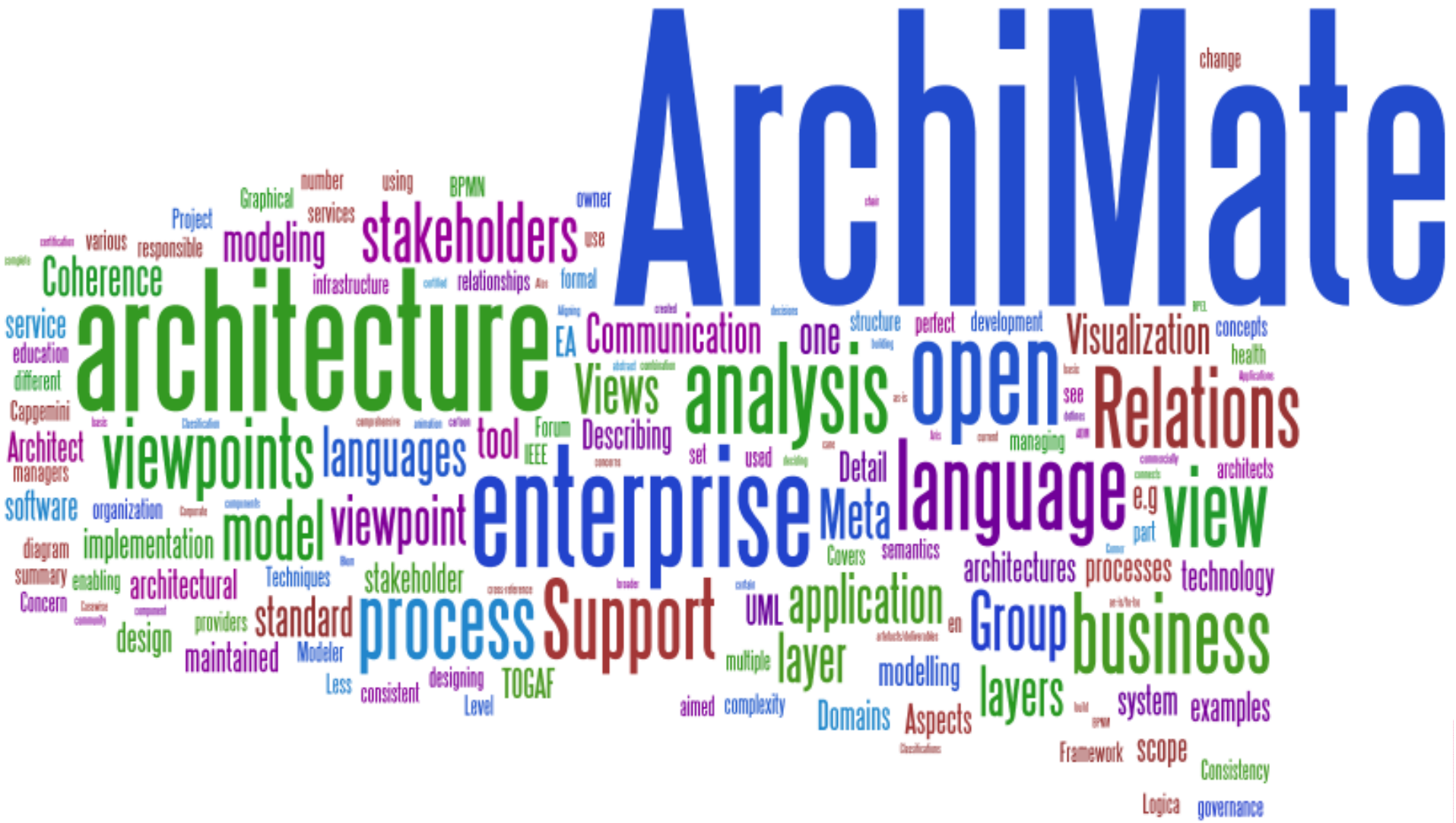
Introduction in ArchiMate

Remco Blom, EA-consultant, BiZZdesign

Enterprise Architecture Practitioners Conference
Seattle, 2010

THE Open GROUP
Making standards work®

What are we talking about…?



Mission BiZZdesign

- To help organizations govern and change (themselves) effectively and rapidly using enterprise architecture, business requirements management, business process improvement & management, supported by
  - Methods
  - Tools
  - Consultancy
  - Training

all certified by The Open Group

TOGAF Tool Support

Architect®

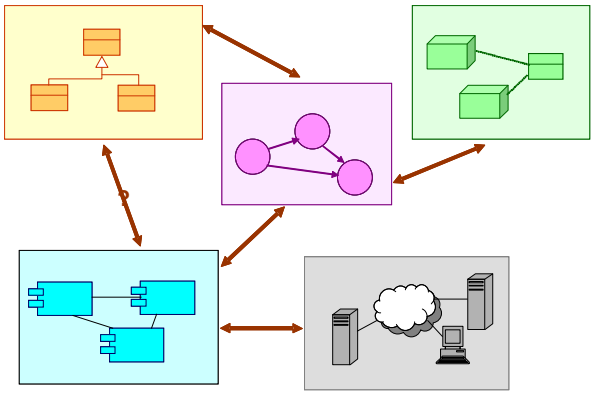
ARCHIMATE®

TOGAF Training

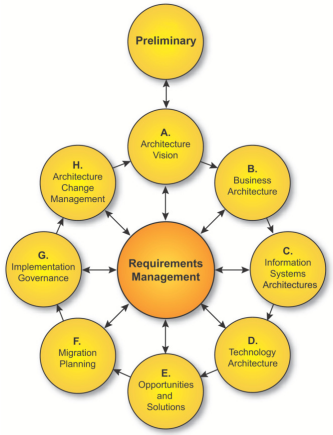
"BiZZdesign has strategically chosen to support open standards and become an active member within The Open Group."

What is Enterprise Architecture?

- A *discipline*, with the objective of *steering changes*
- A *product*
  - A design that shows the coherence between products, processes, organisation, information supply and infrastructure, based on a vision and certain explicit starting points, principles and preferences



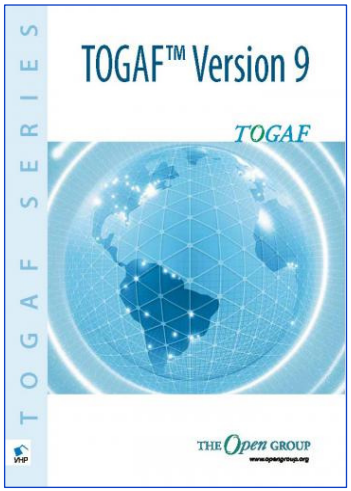
- A *process*
  - Way of working
  - Aimed at the development and use of enterprise architectures within an enterprise
  - With people and resources

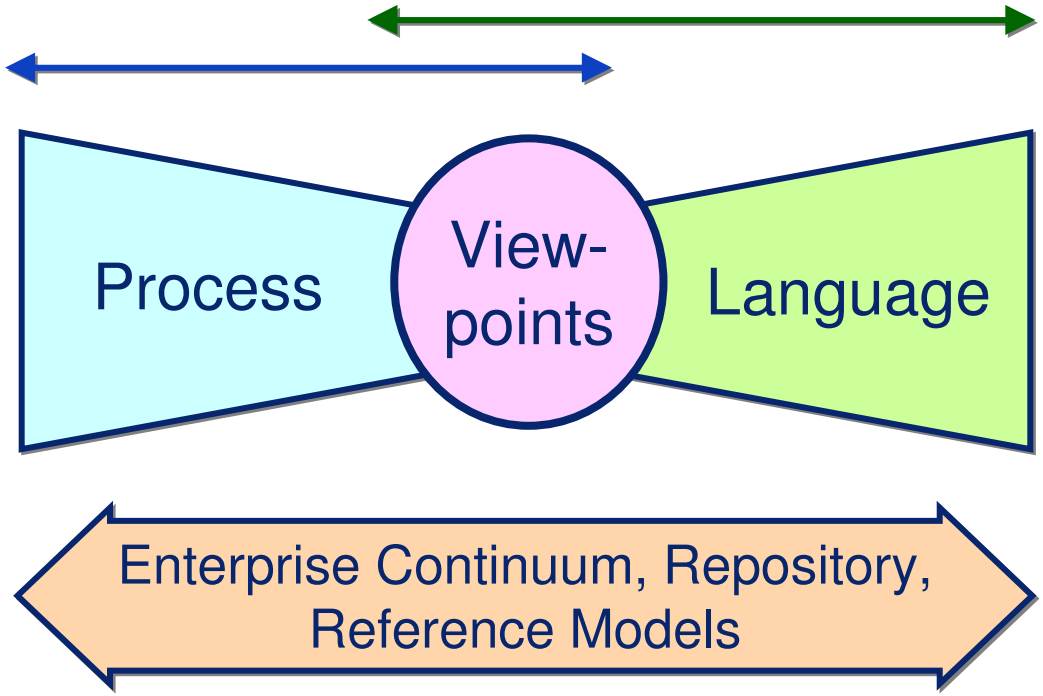


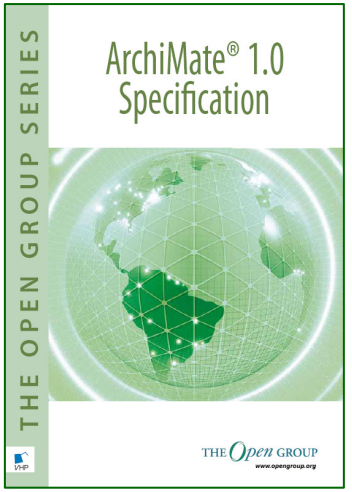
Ingredients of an EA Approach

TOGAF

ArchiMate



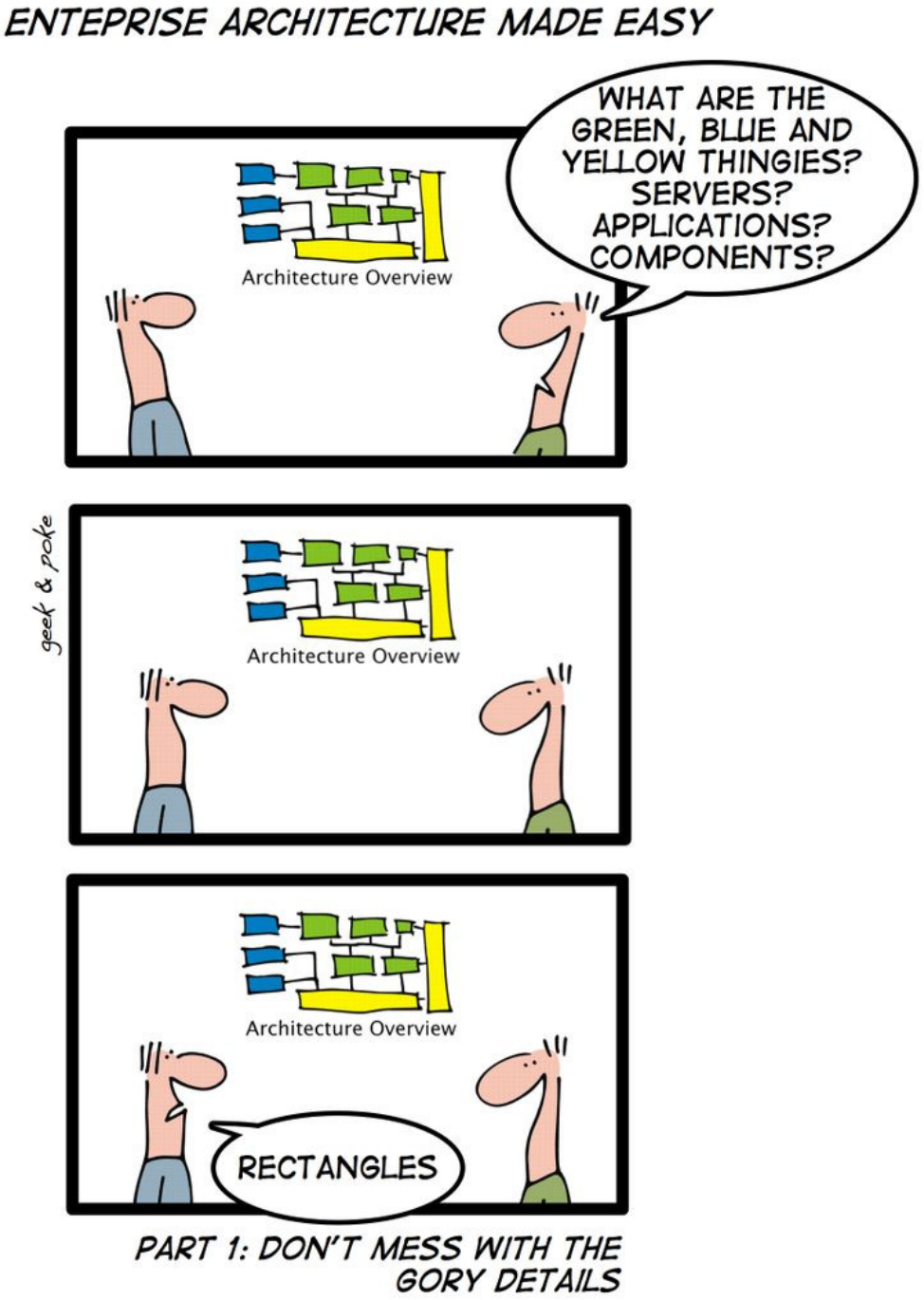




A real language

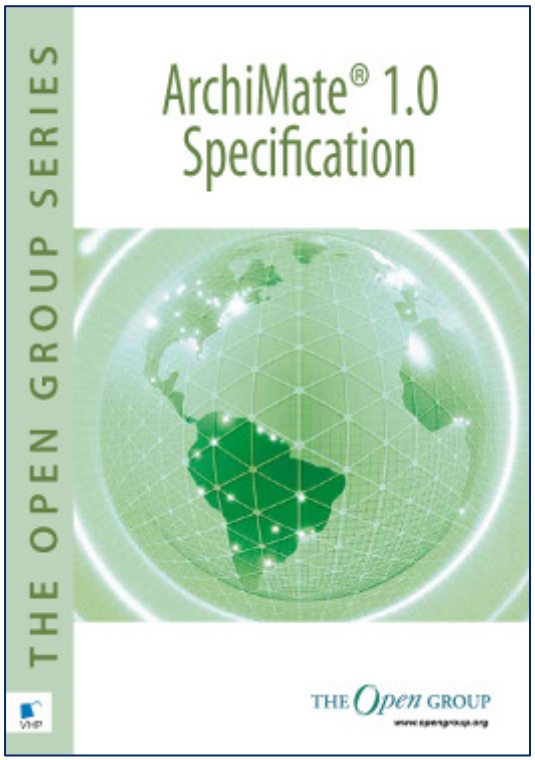
- Boxes become concepts
- Lines become relations

- A modelling language contains concepts, relations, semantics, rules and notation

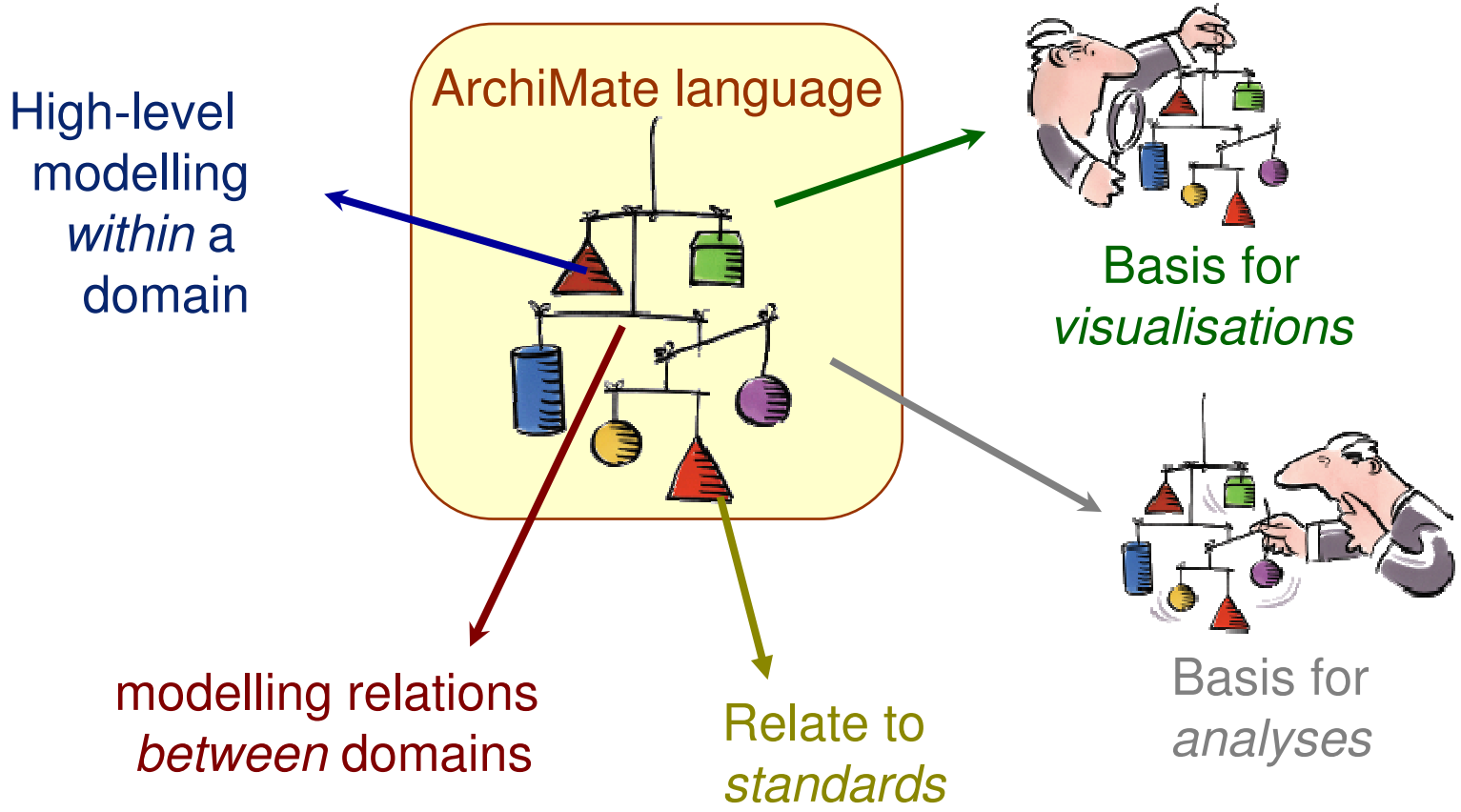


ArchiMate

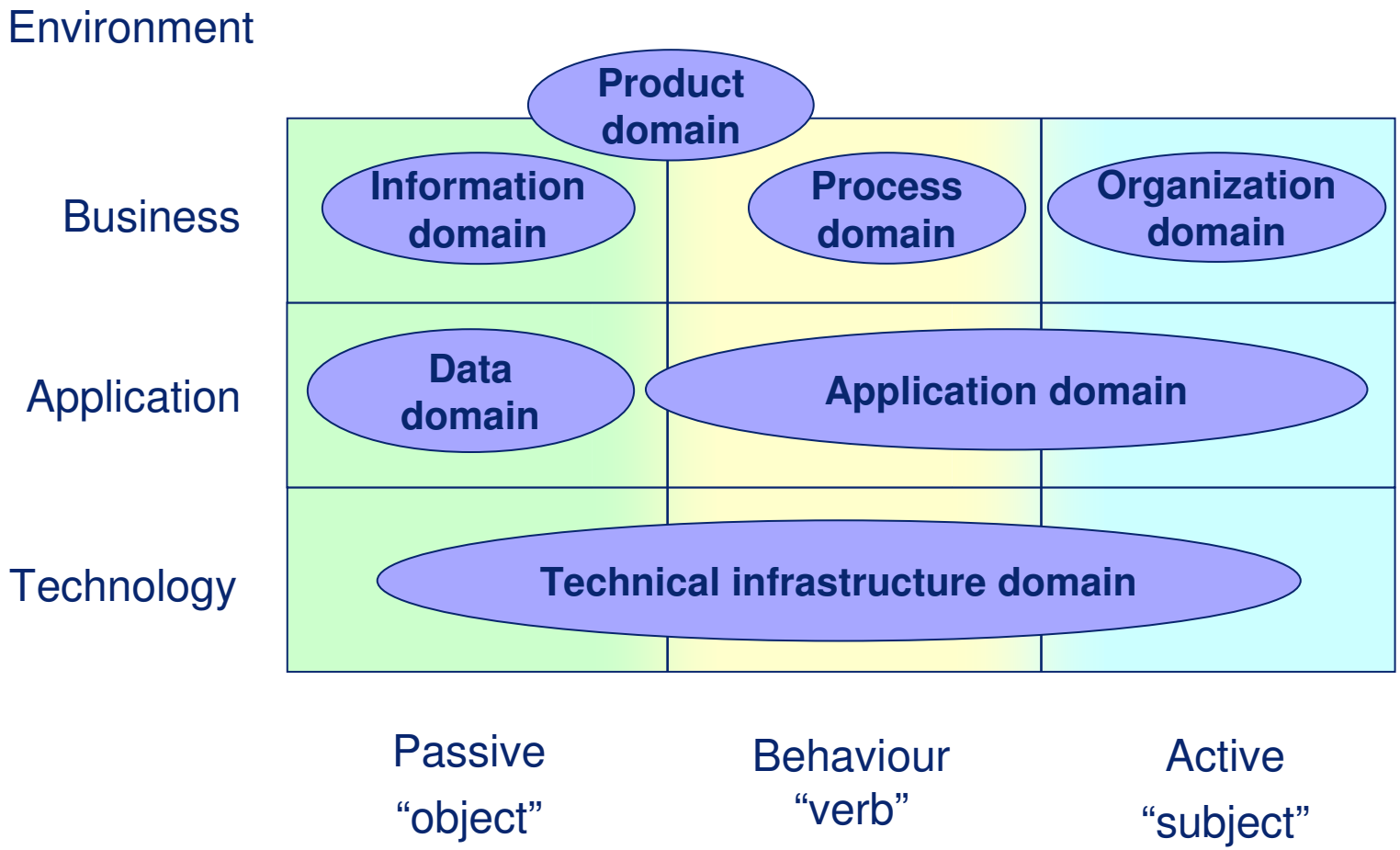
- A *language* for describing architectures
- Covers business, application and technology layers
  - With relations between these layers
- Graphical language with formal semantics, enabling analysis and tool support
- Techniques for *visualization* and *analysis*, aimed at various stakeholders
- Open standard maintained by The Open Group
- See www.opengroup.org/archimate or www.archimate.org



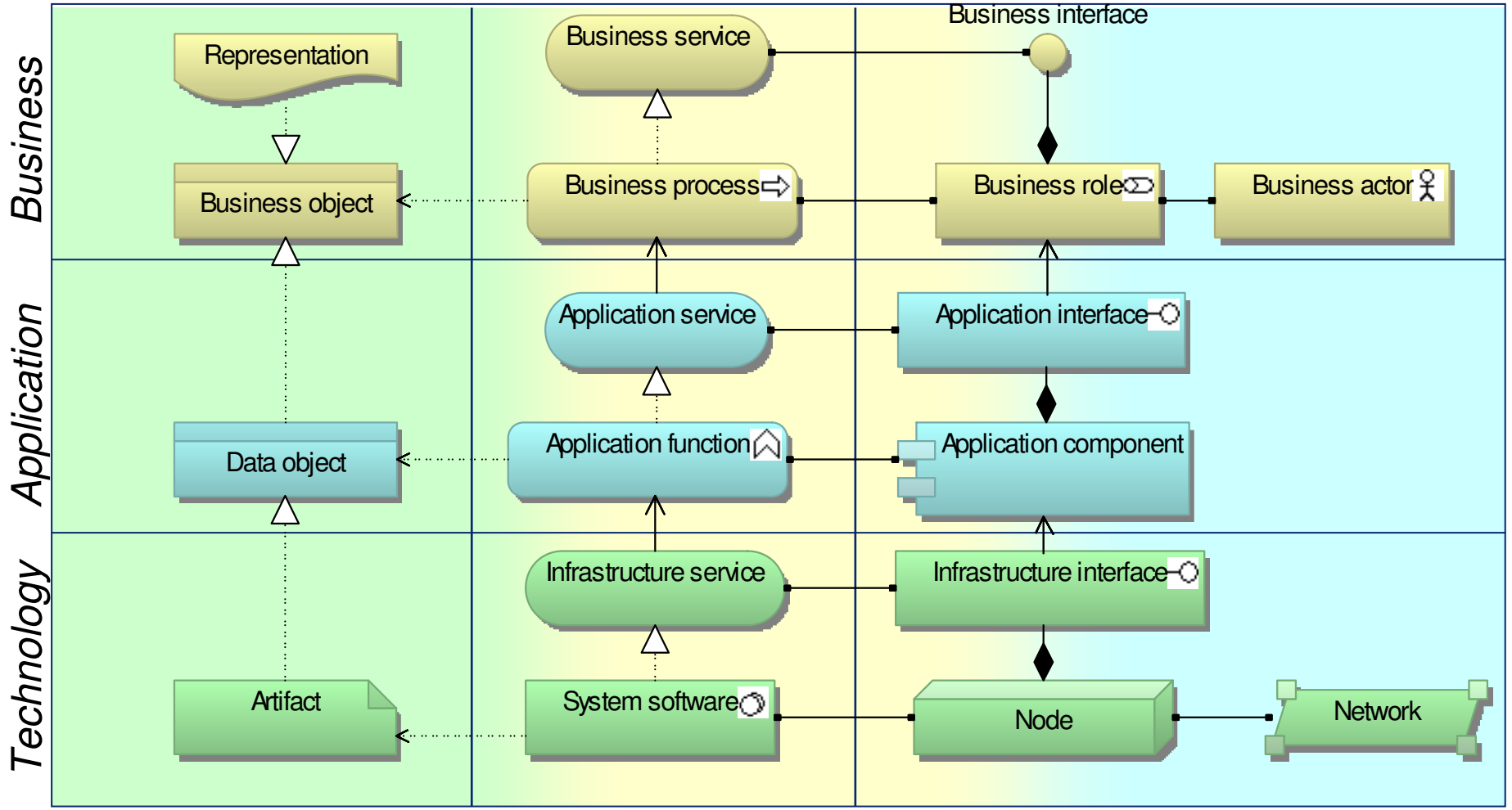
The ArchiMate Language



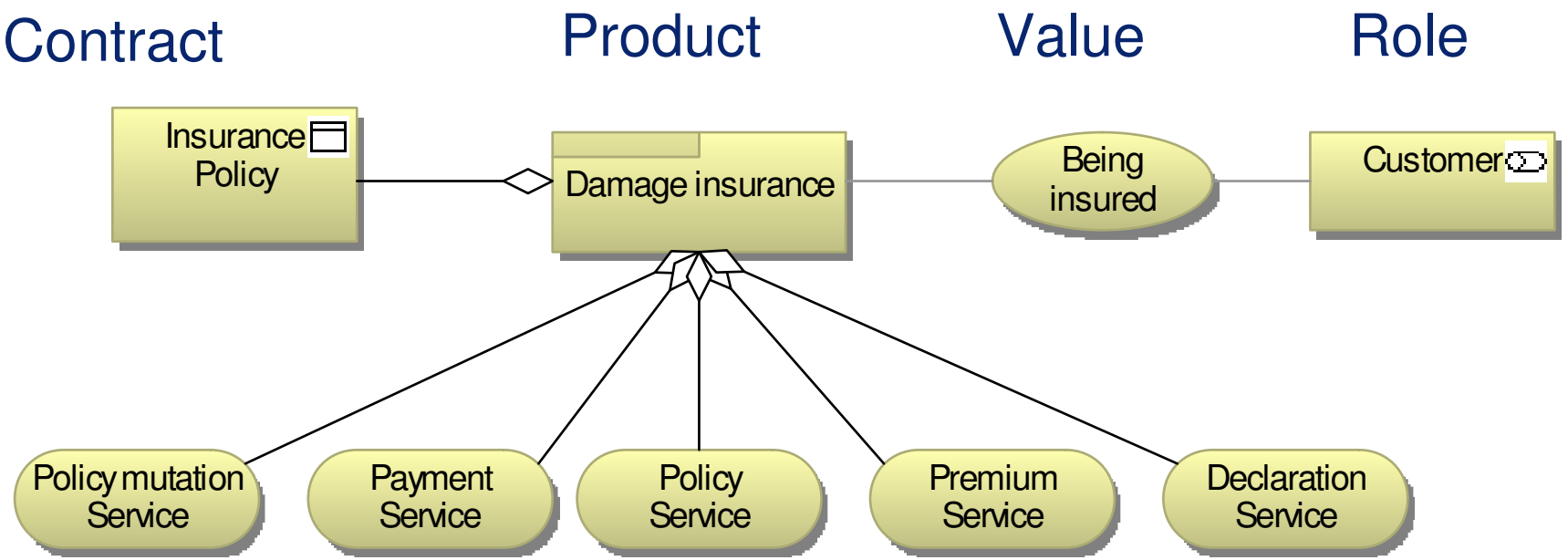
Layers, Aspects, and Domains



Language summary



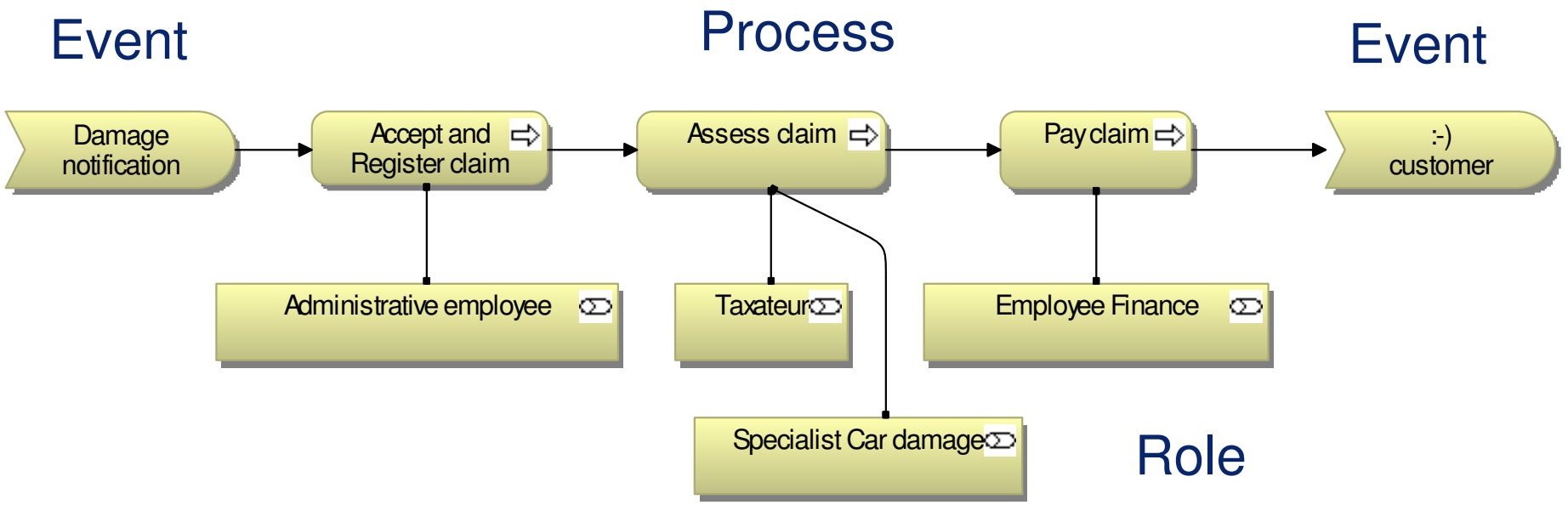
Products and services



Business services

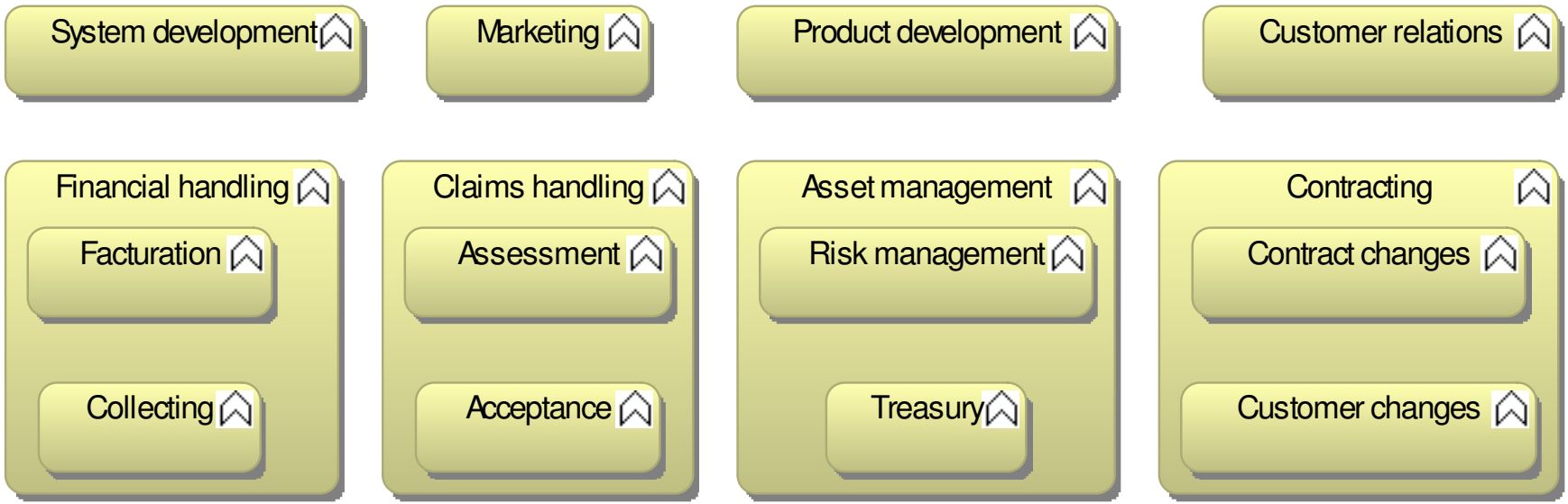
Aggregation
Association

Processes and roles



Triggering
Assignment

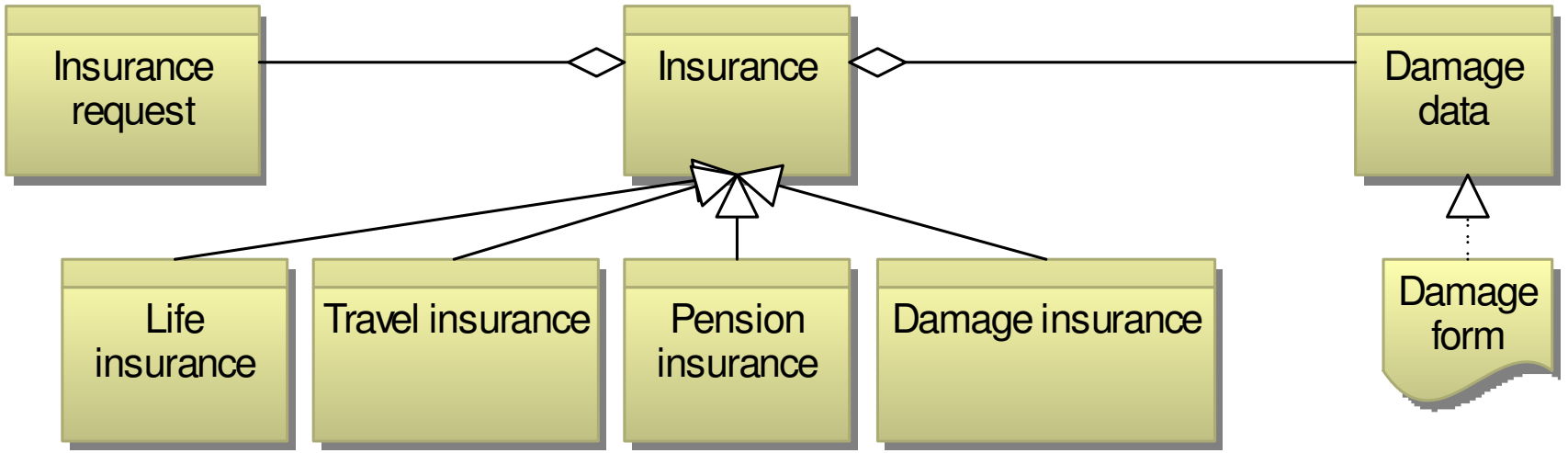
Business functions



Business Function

Composition (by nesting)

Business objects

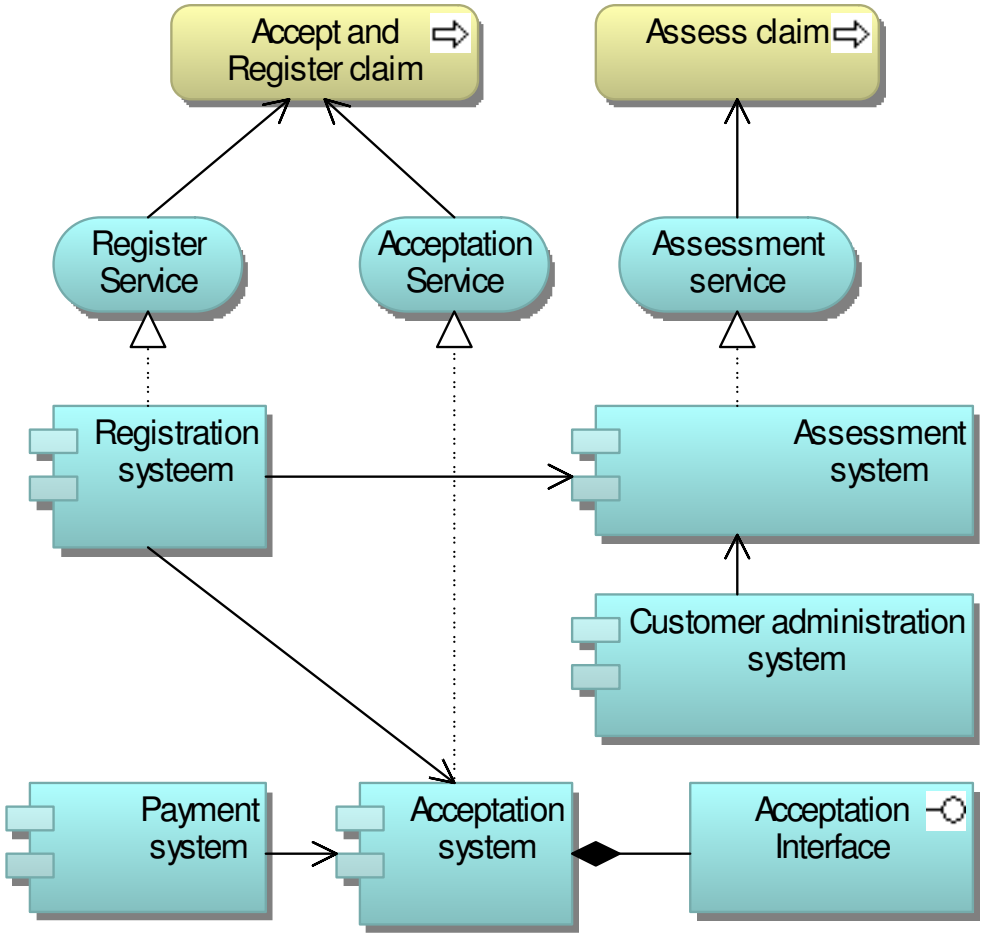


Business object

Representation

Aggregation
Specialization
Realization

Applications and application services



Business process

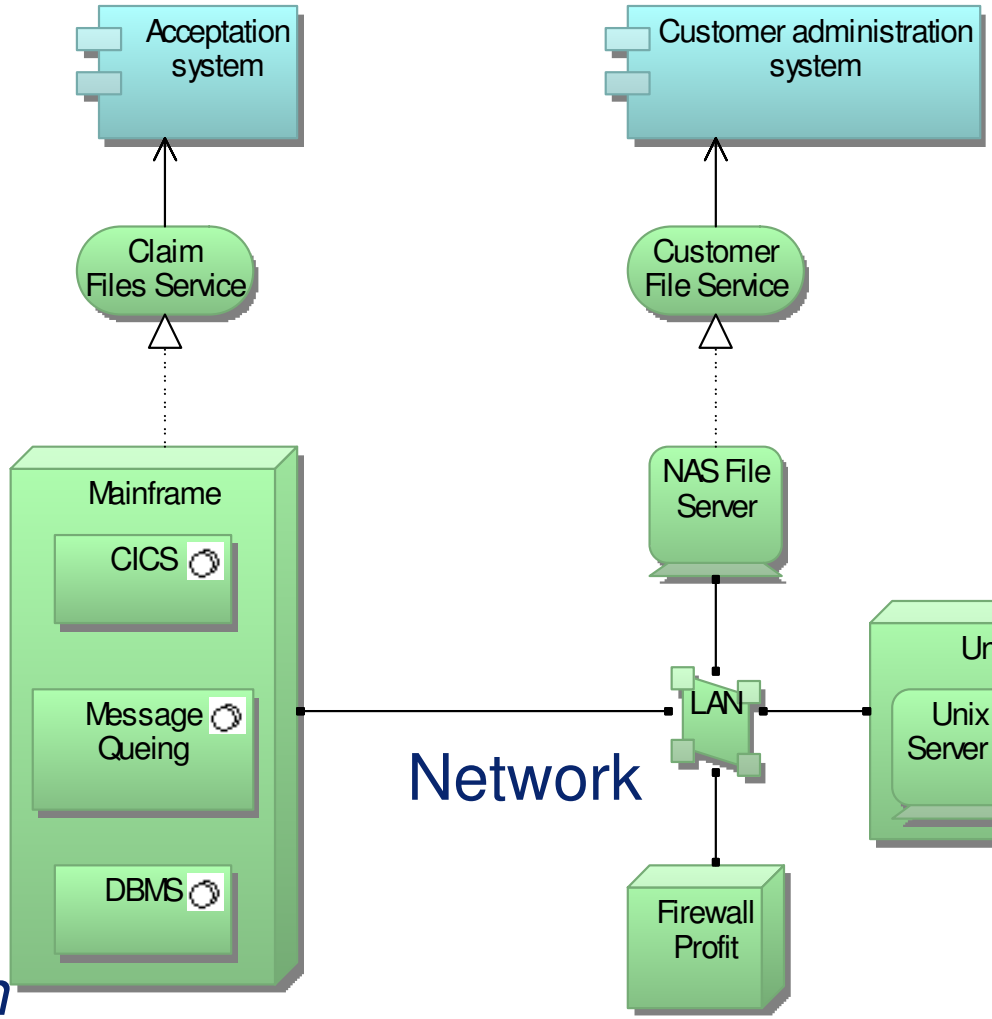
Application service

Application component

Application interface

Used-by
Realization
Composition

Infrastructure



Application component

Infrastructure service

System software

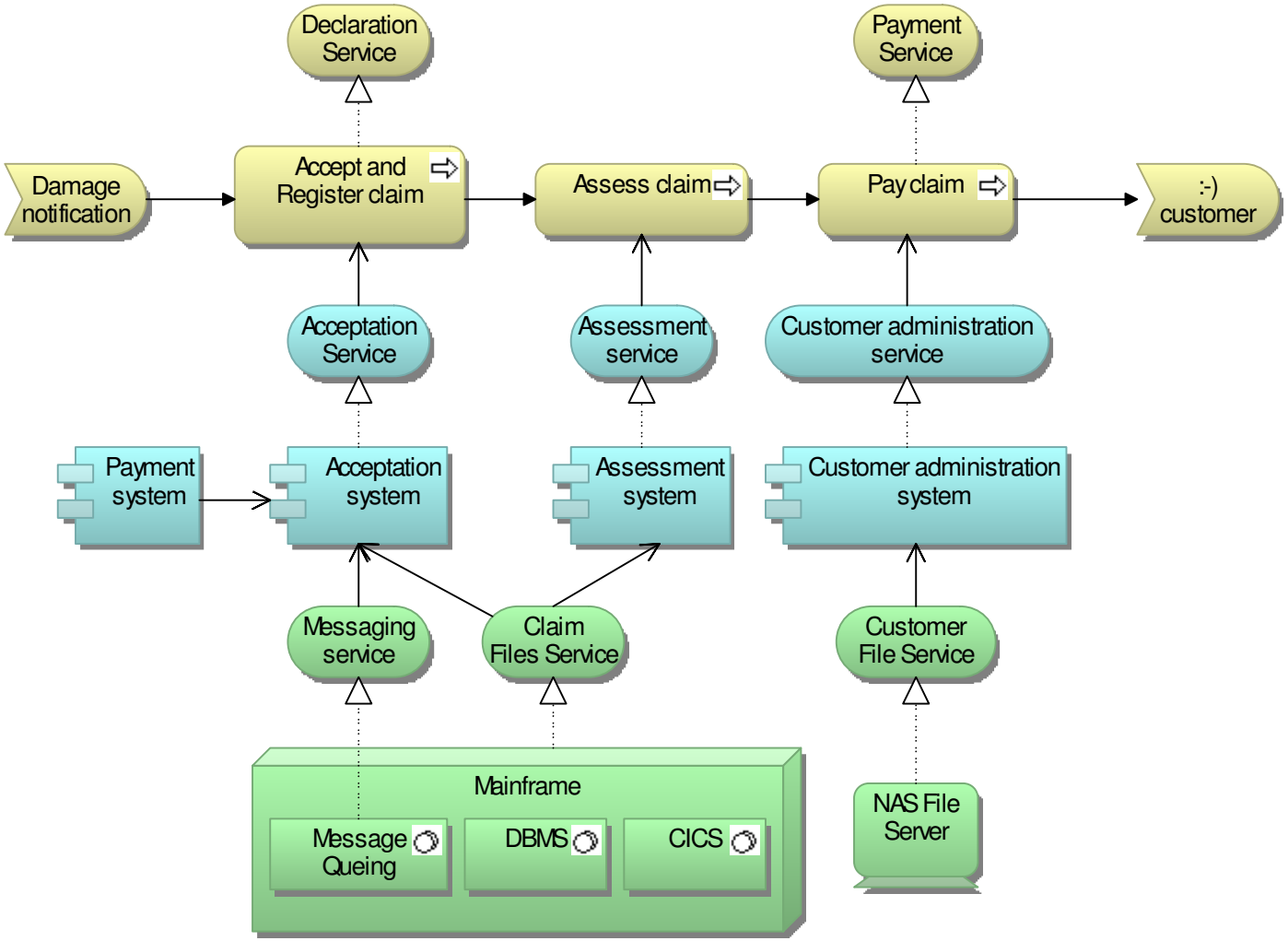
Node

Device

Network

Used-by
Realization
Assignment
Composition

Layered view



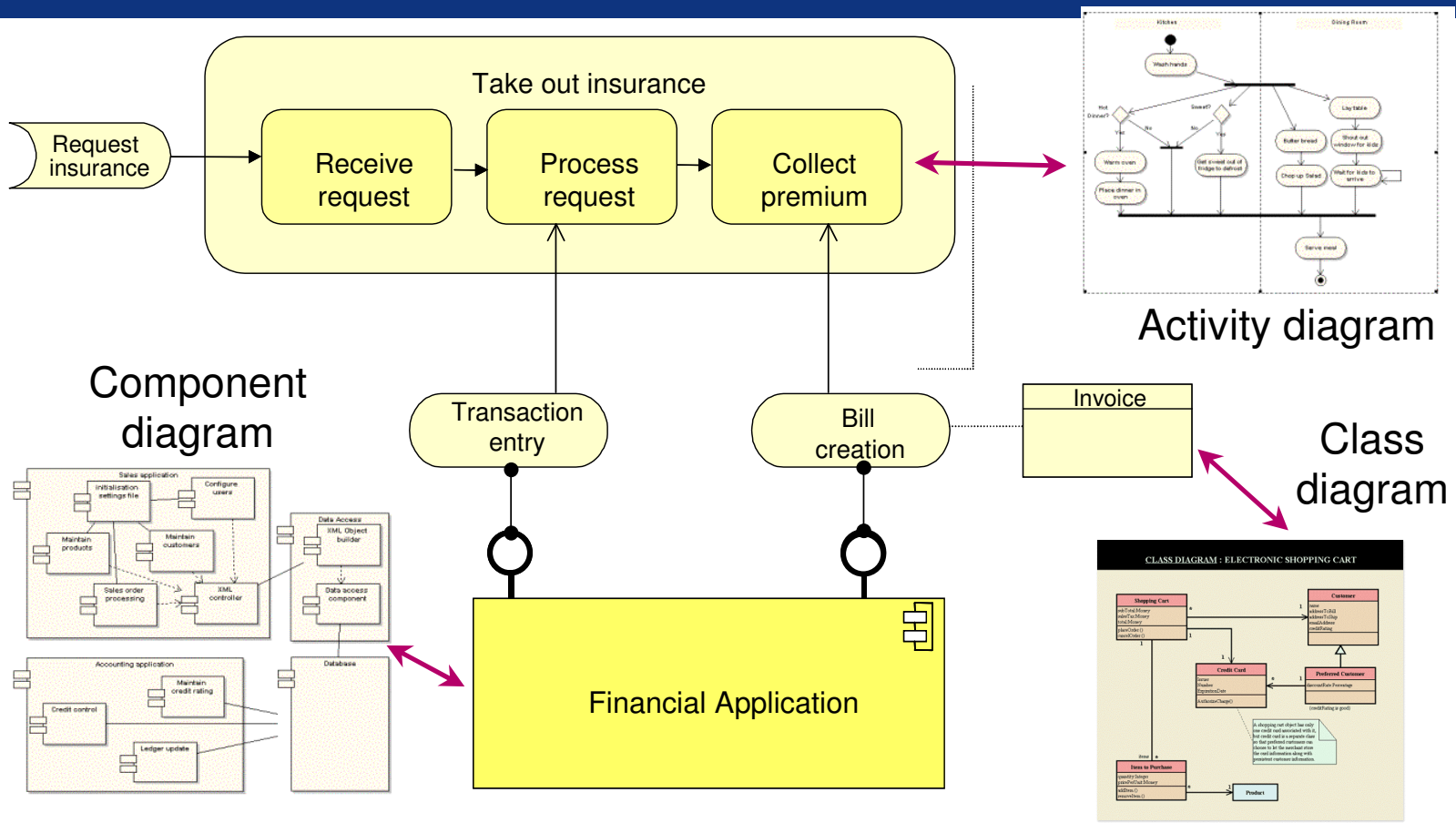
ArchiMate and support

- Low entrée level
  - Free format in Visio/OmniGraffle stencils
- ArchiMate is commercially supported
  - By certified tool vendors
    - BiZZdesign: Architect
    - Casewise: Corporate Modeler
    - IDS Scheer: Aris ArchiMate Modeler
    - Telelogic: System Architect
    - Troux: Metis
  - By a large number of service providers like Atos Origin, BiZZdesign, Capgemini, Getronics, Logica, Sogeti, Ordina,…
- Certification for individual architects and training is in progress

Why not dive straight into UML?

- Business people just don't understand it!
- Not designed for enterprise architecture
- Lack of integration of business, application and technical infrastructure aspects
- Too many details
- No explicit service paradigm
- Many diagrams = many models
  - ArchiMate works with views on one model

Refer detailed models to your ArchiMate models

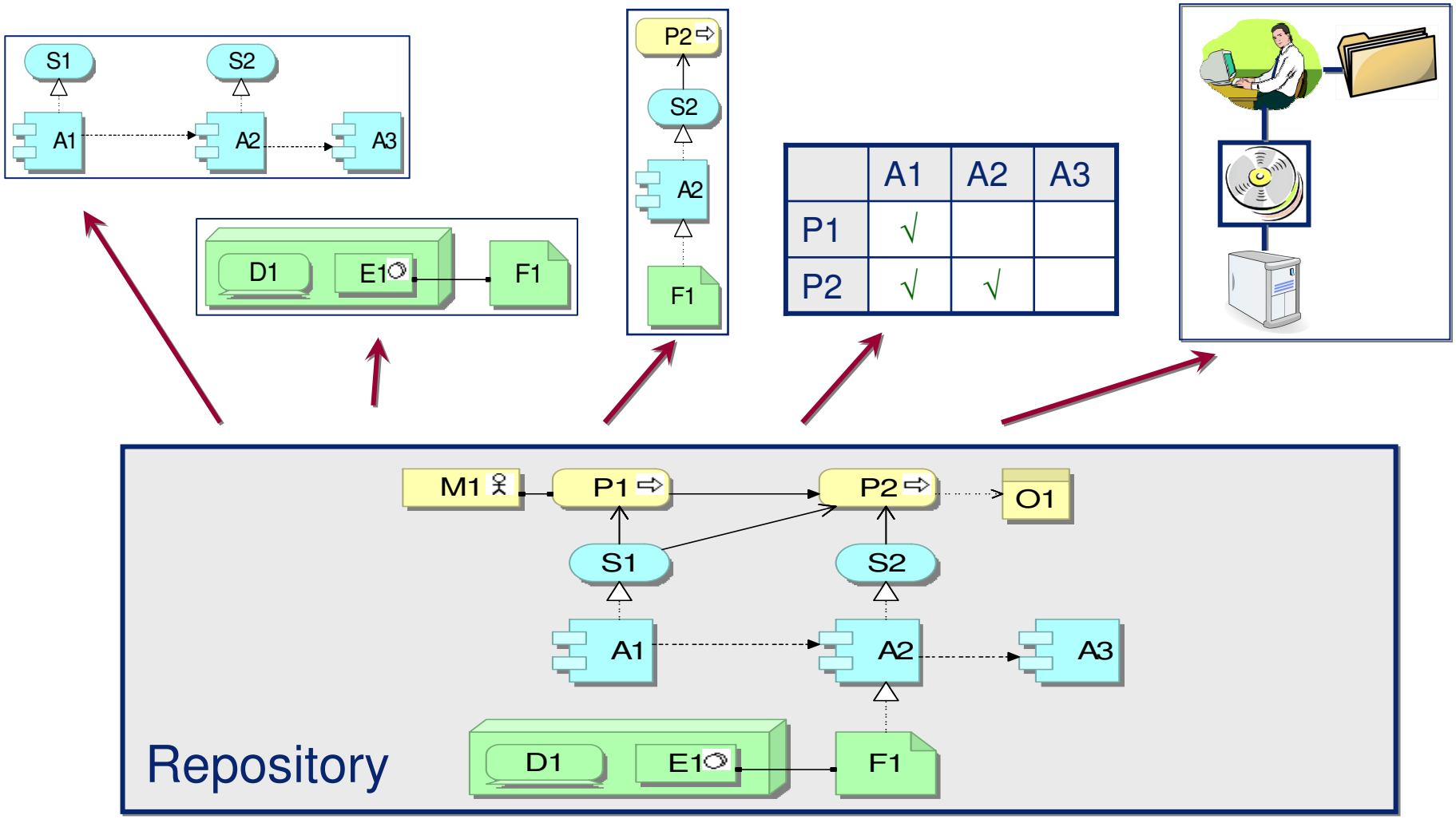


Detailled models in UML, BPMN, also pay attention to the relation to less formal modelling in Powerpoint and Visio

ArchiMate – Benefits

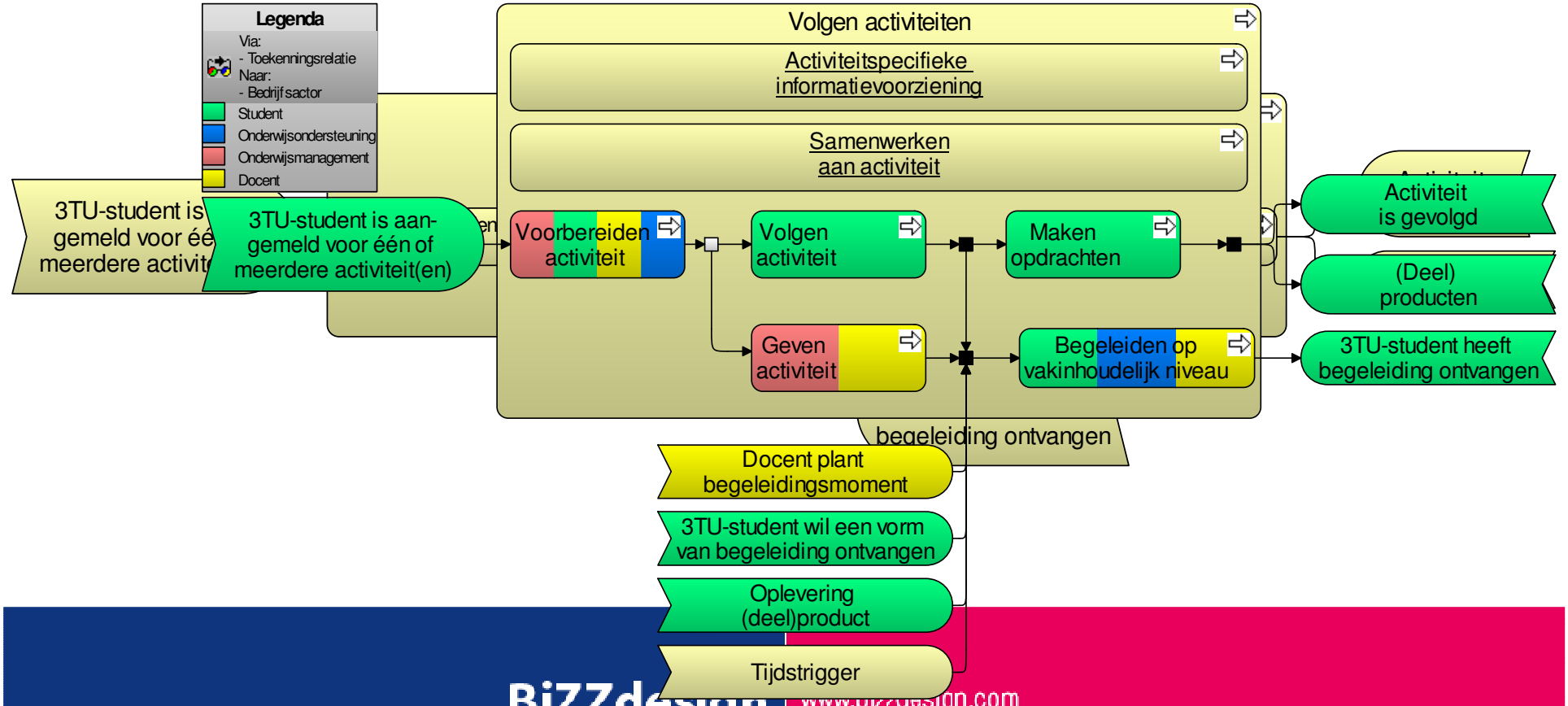
1. Makes EA visible to stakeholders
2. Specifically designed for EA
3. Services as central concepts
4. Widely accepted open standard
5. Communication with various stakeholders
6. Flexible
7. Easy to get started (2 day training to get started)
8. Unambigious, integrated, coherent and consistent modelling
9. Analyses (Impact-of-change, GAP, etc)
10. Supported in tools and by service providers

Views on a shared model

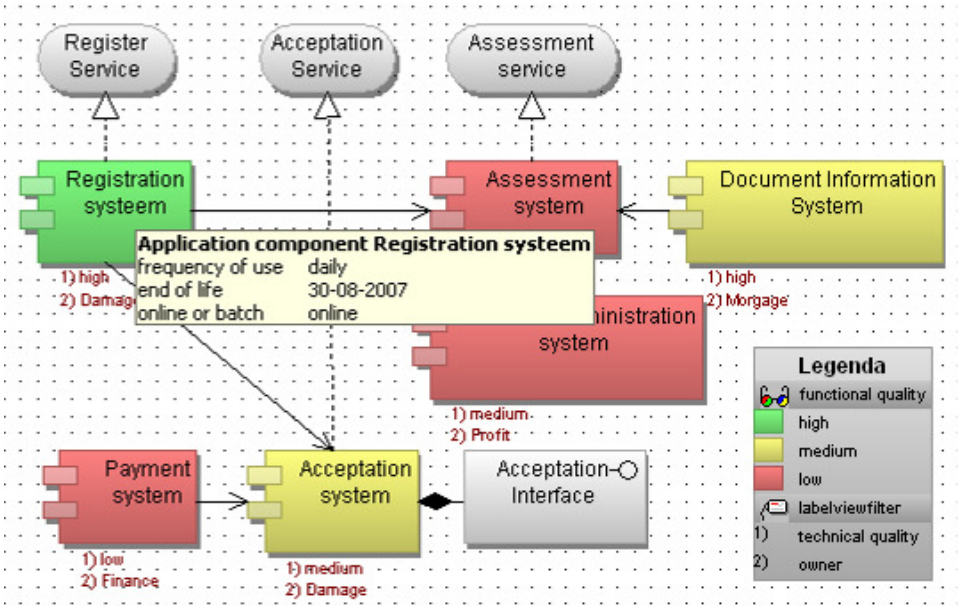


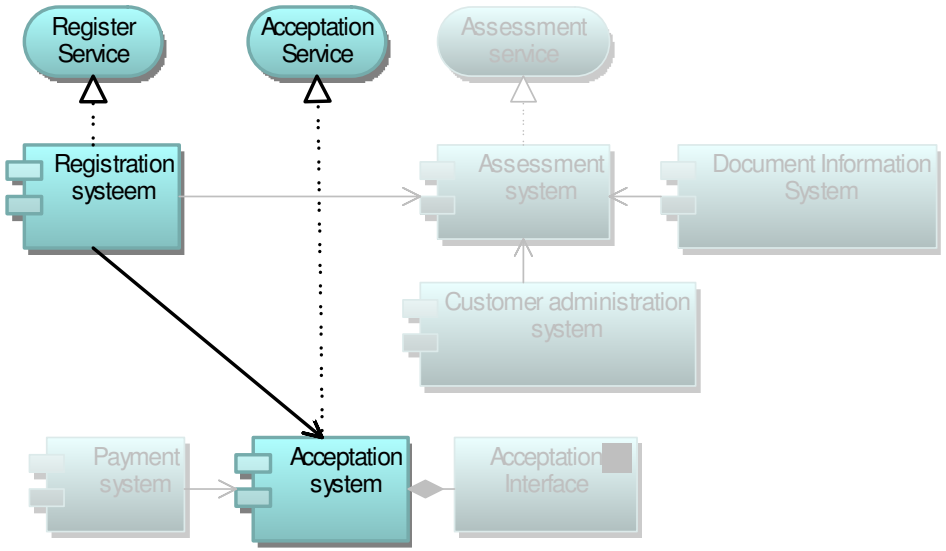
Events, Processes, Actors

- Participate in educational activity
- More detailed

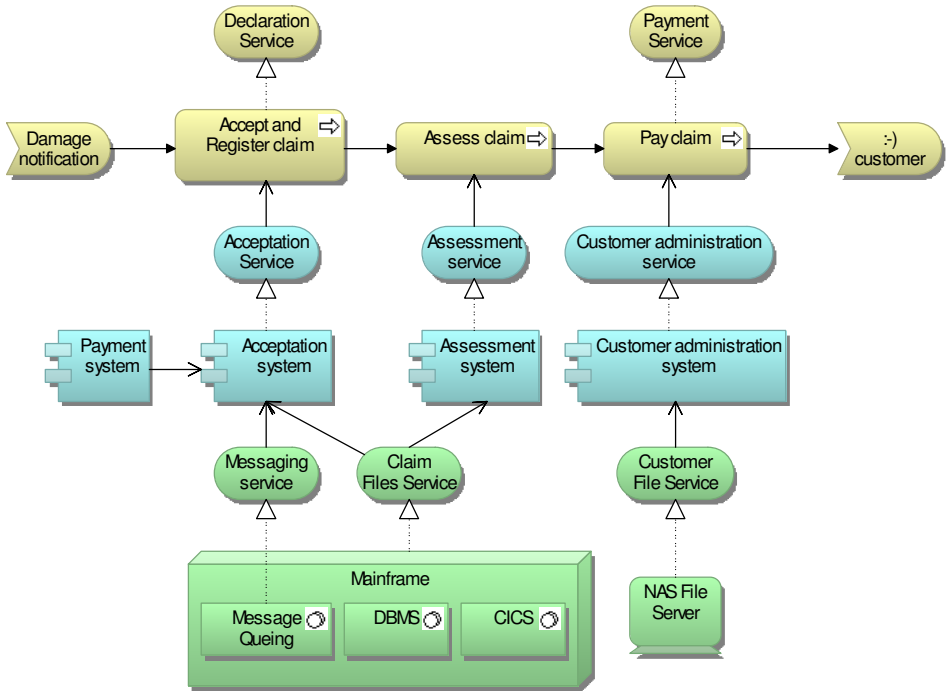


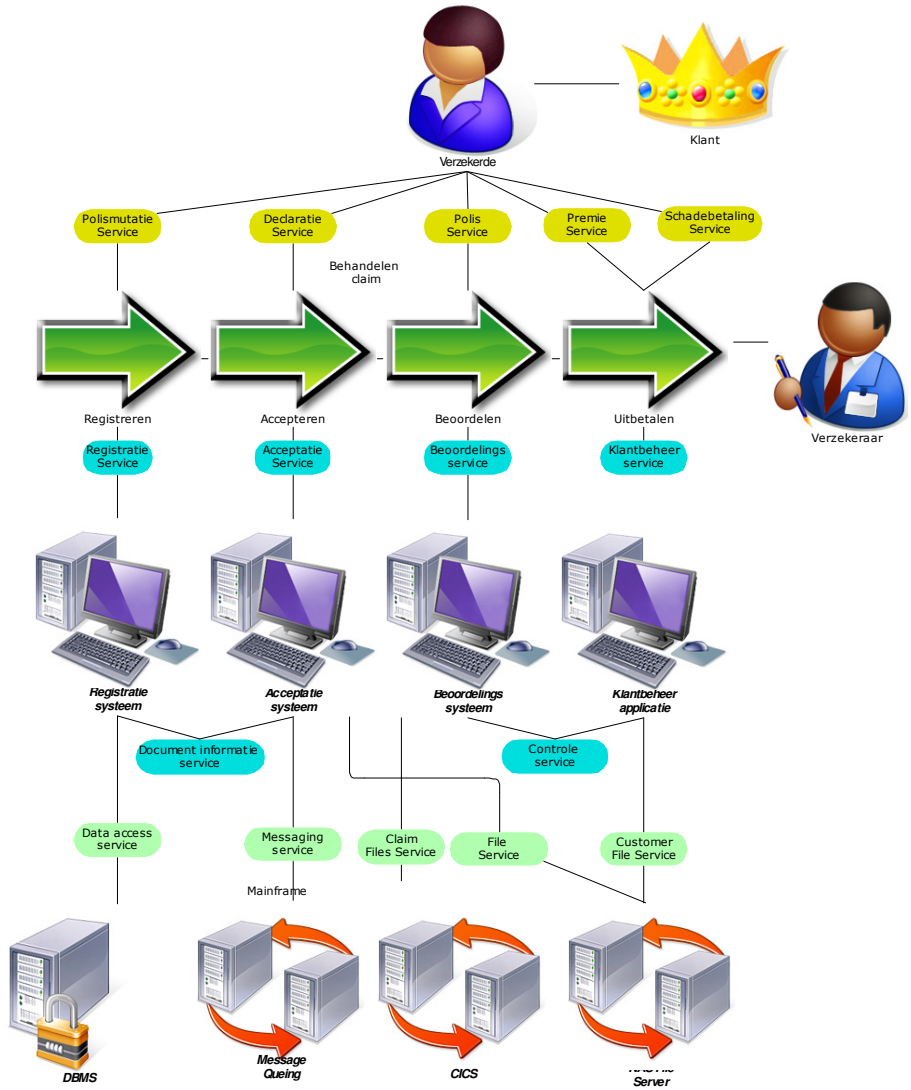
Examples views





Stakeholder specific visualisation

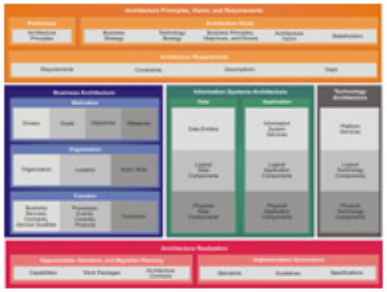




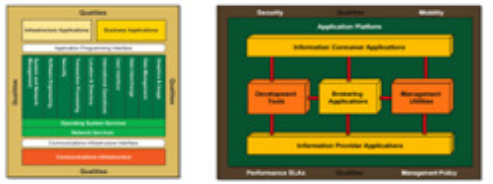
The TOGAF Components

ADM

Architecture Content Framework

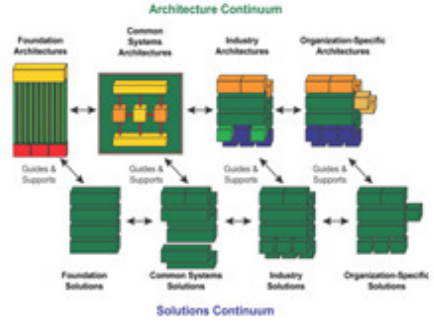


Reference Models

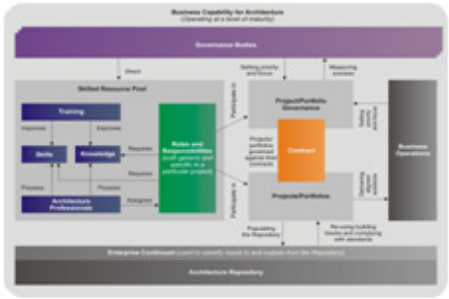


ADM Guidelines & Techniques

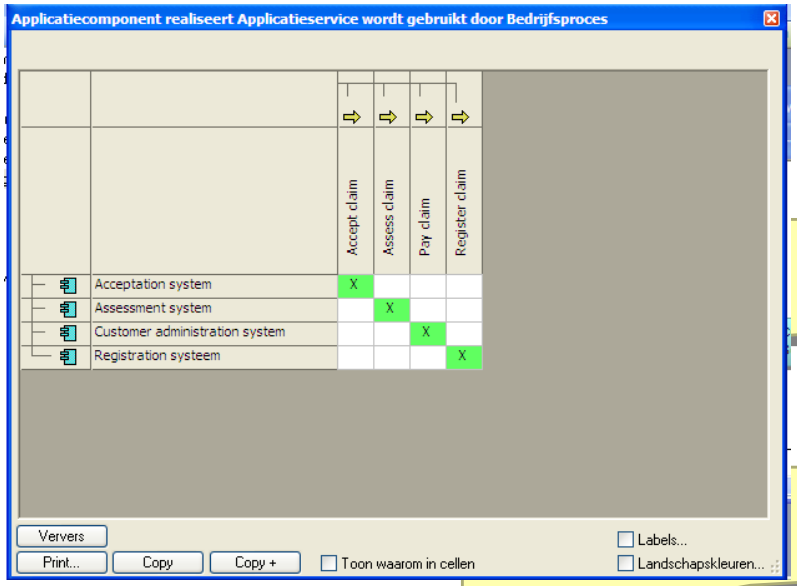
Enterprise Continuum

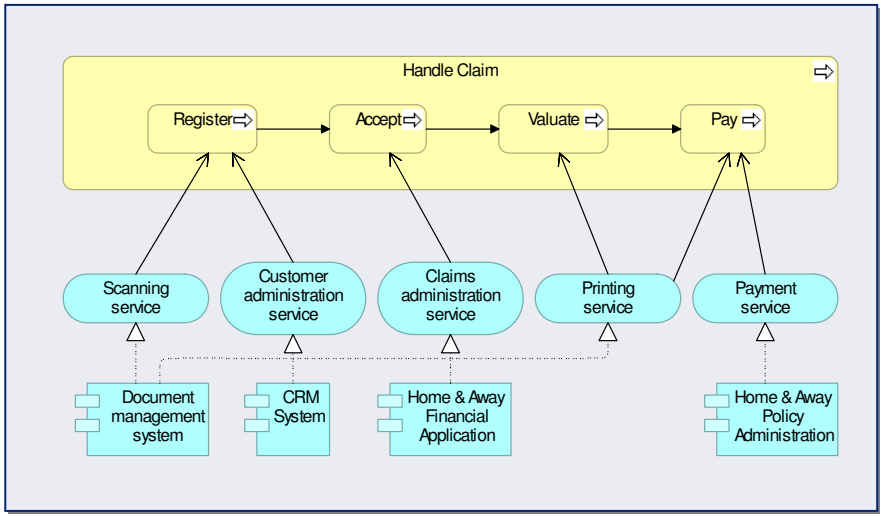


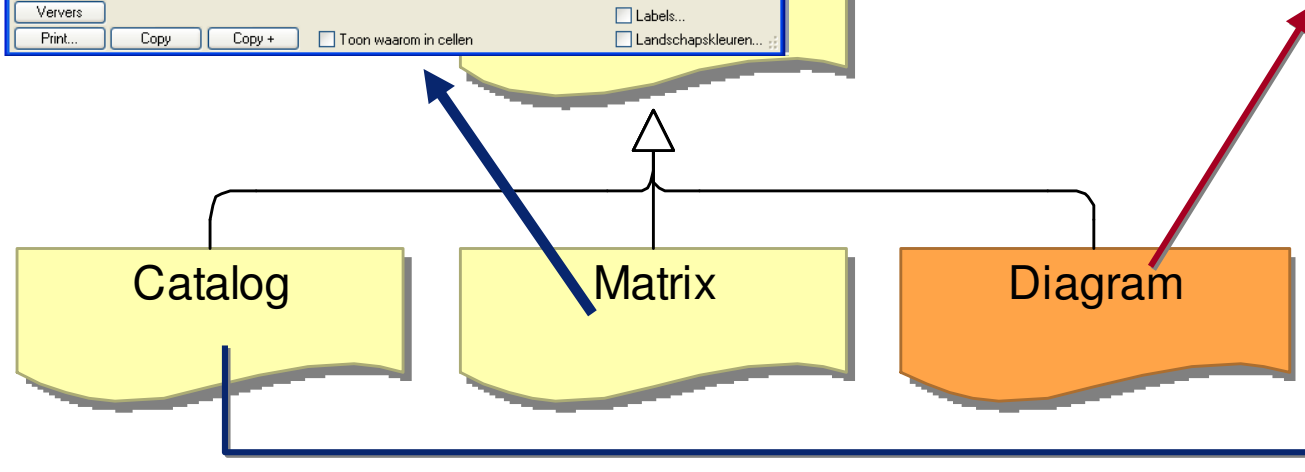
Architecture Capability Framework

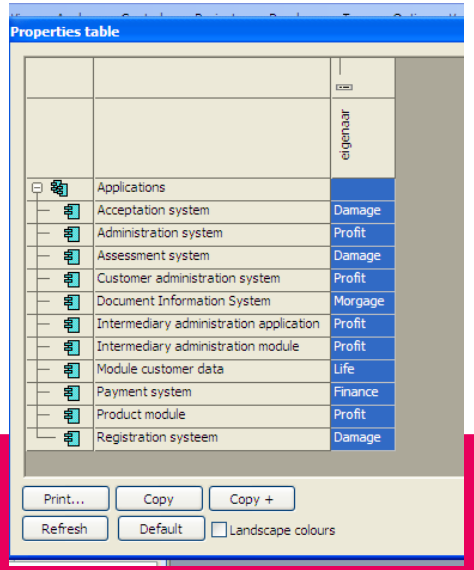


Deliverables and artifacts

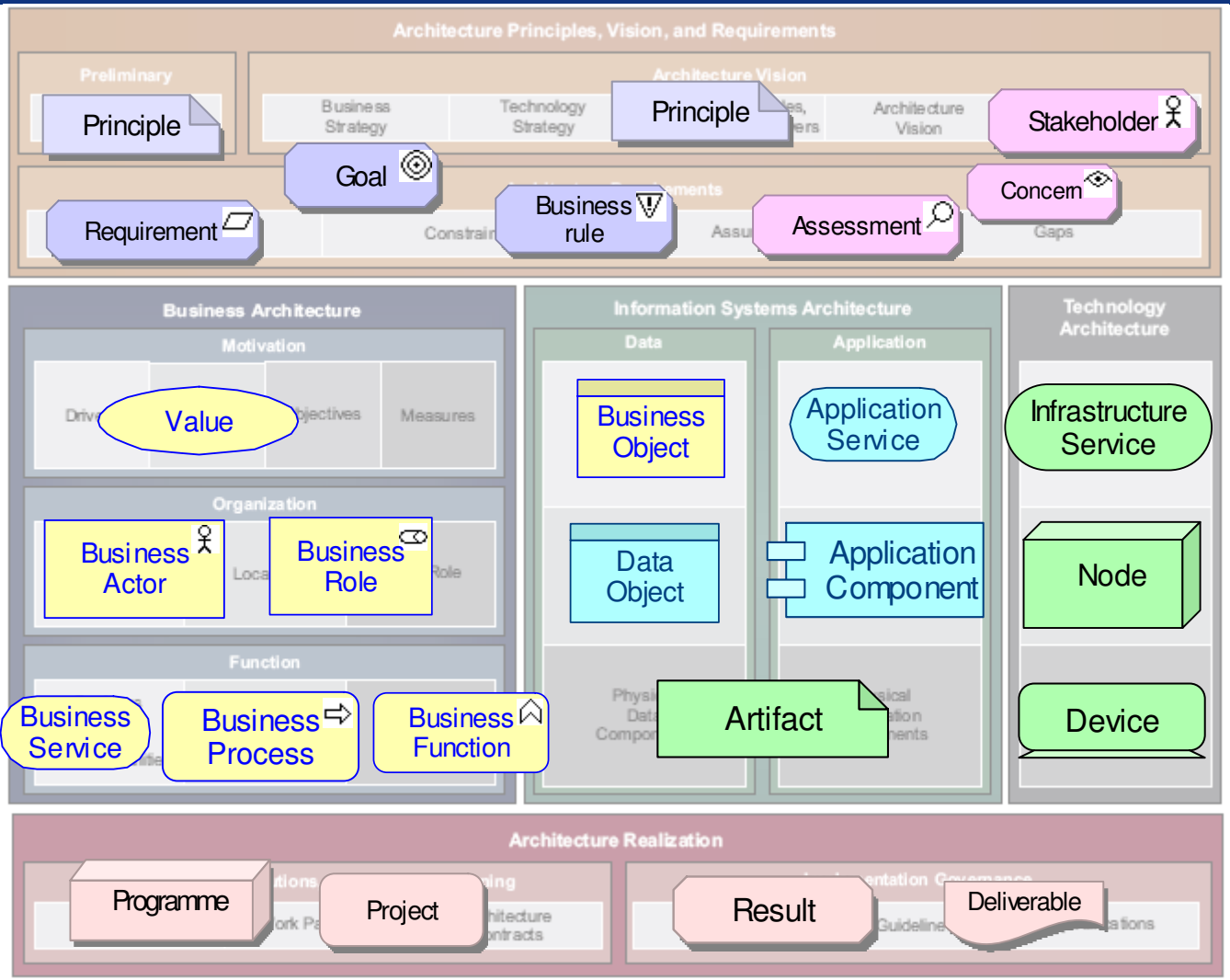








ArchiMate 1.0 and purposed extensions



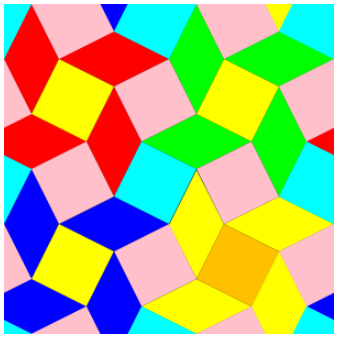
TOGAF ACF and ArchiMate

- ArchiMate provides a well-defined language, including graphical notation, covering the core of the ACF.
- With ArchiMate, relations between different architectural domains can also be modelled
- ArchiMate models form a basis for views, visualizations, and analysis
- Some concepts from the ACF are addressed as extensions of the language in whitepapers

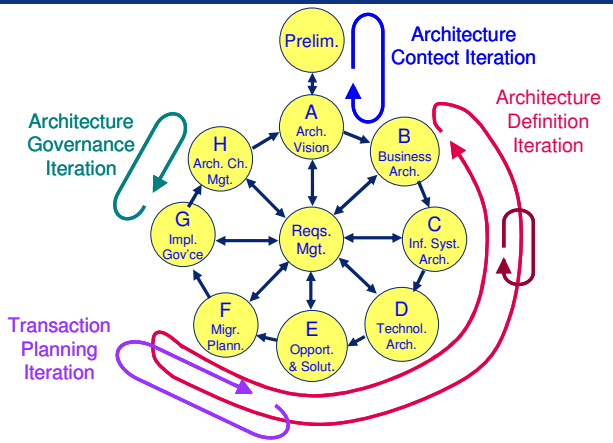
ArchiMate and TOGAF's guidelines and techniques

- Iteration
- Service paradigm
- Stakeholders
- Patterns
- Building Blocks
- Business Scenario's
- GAP analyses

Gap analysis



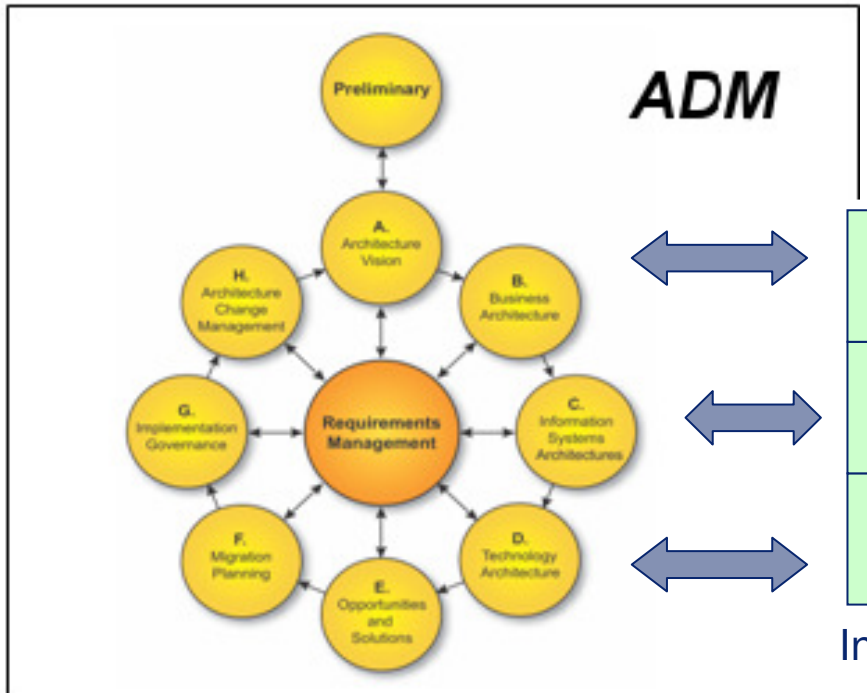
Architecture patterns

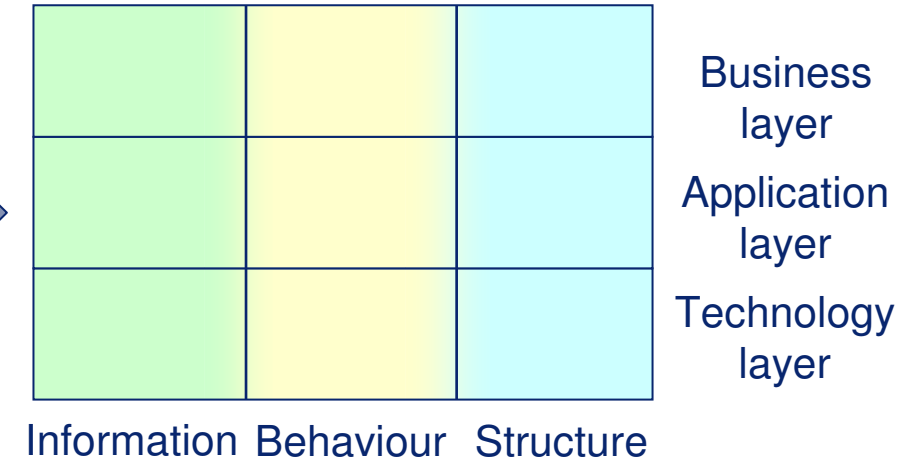


Applying iteration to the ADM

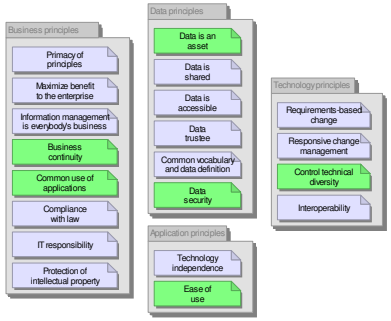
TOGAF, ArchiMate and SOAs

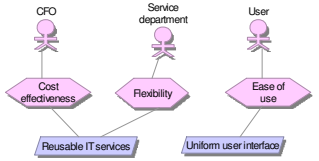
The ADM and ArchiMate

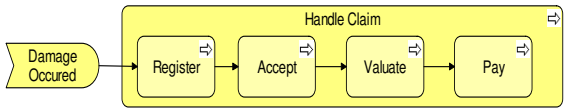


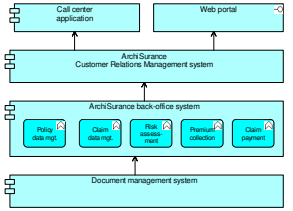


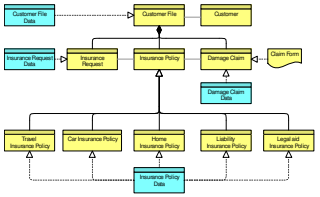
Case study: Models throughout the ADM

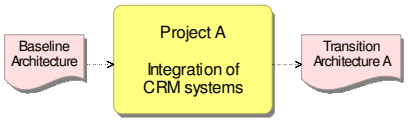


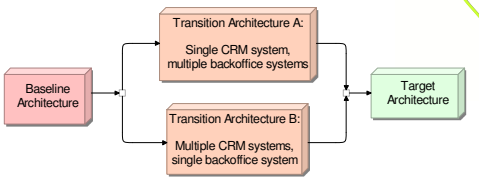


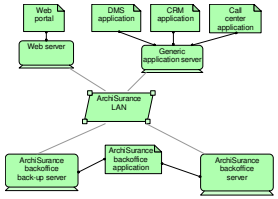












Case study introduction: ArchiSurance

ArchiSurance: a 3-company merger

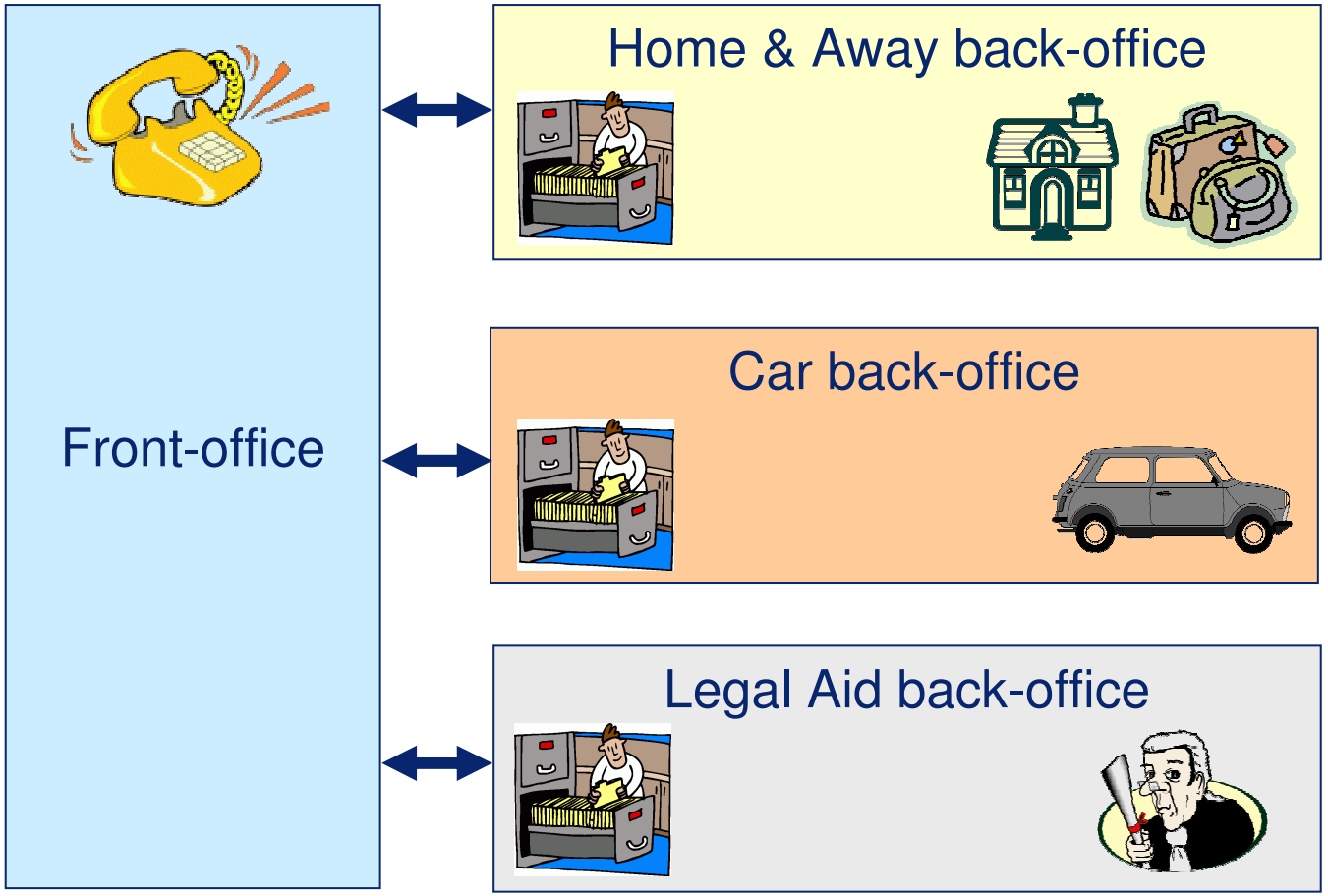
ArchiSurance Home & Travel insurances

PRO-FIT Car insurances

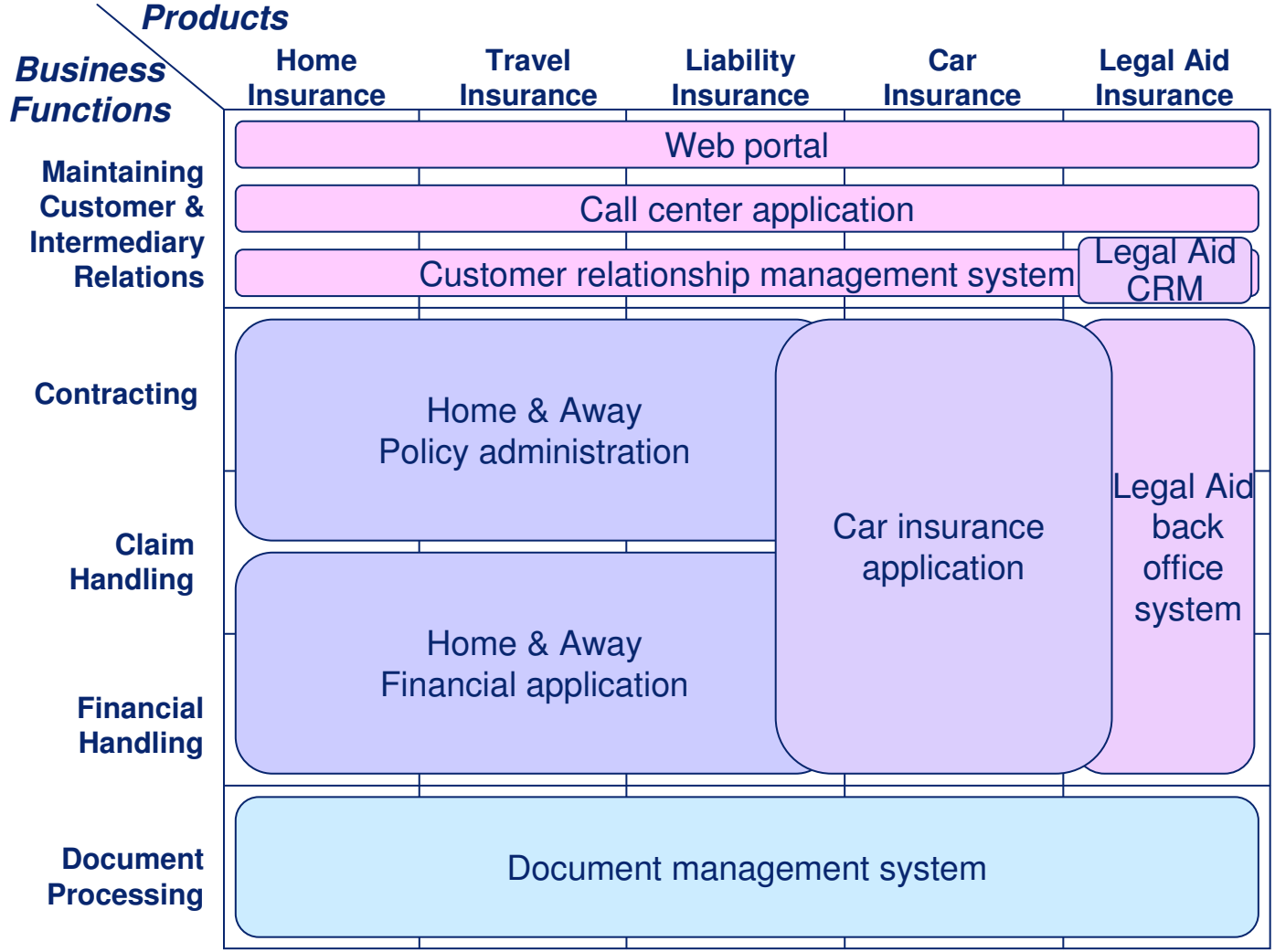
LegallyYours Legal Aid insurances

The "new" ArchiSurance

Structure of the new company

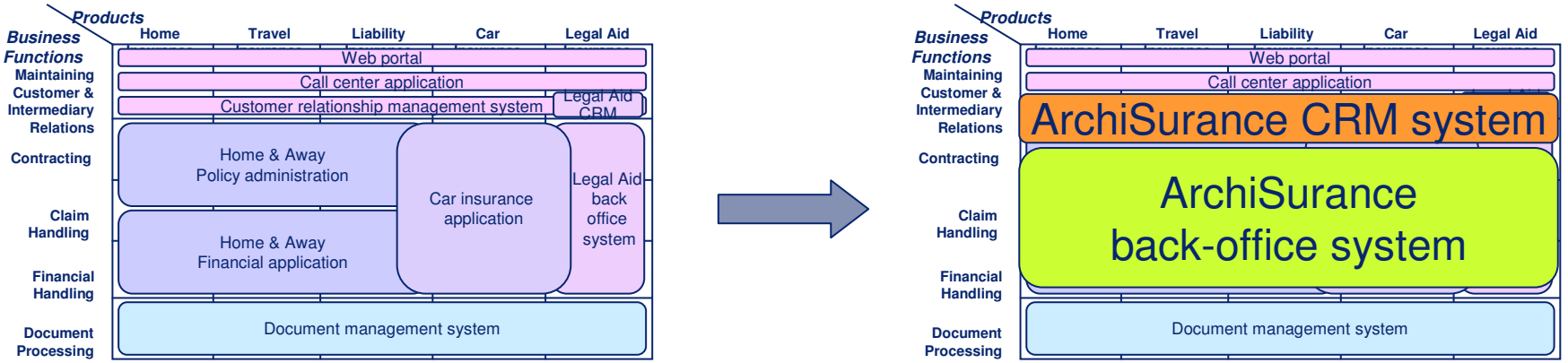


Main IT systems of ArchiSurance



Proposed change

- Develop a single back-office system (for policy administration and financial handling) to be used by the three back-offices.
- This system will eventually replace:
  - The Policy administration system and Financial application of the Home & Away back-office
  - The Car insurance application of the Car back-office
  - The Legal aid back-office system
- The separate CRM system of Legal Aid will also disappear



Architecture principles

Ext. ARCHIMATE®

Business principles

- Primacy of principles
- Maximize benefit to the enterprise
- Information management is everybody's business
- Business continuity
- Common use of applications
- Compliance with law
- IT responsibility
- Protection of intellectual property

Data principles

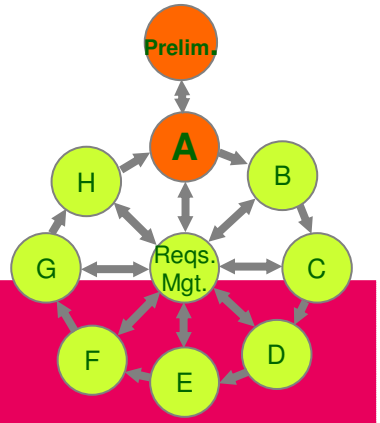
- Data is an asset
- Data is shared
- Data is accessible
- Data trustee
- Common vocabulary and data definition
- Data security

Application principles

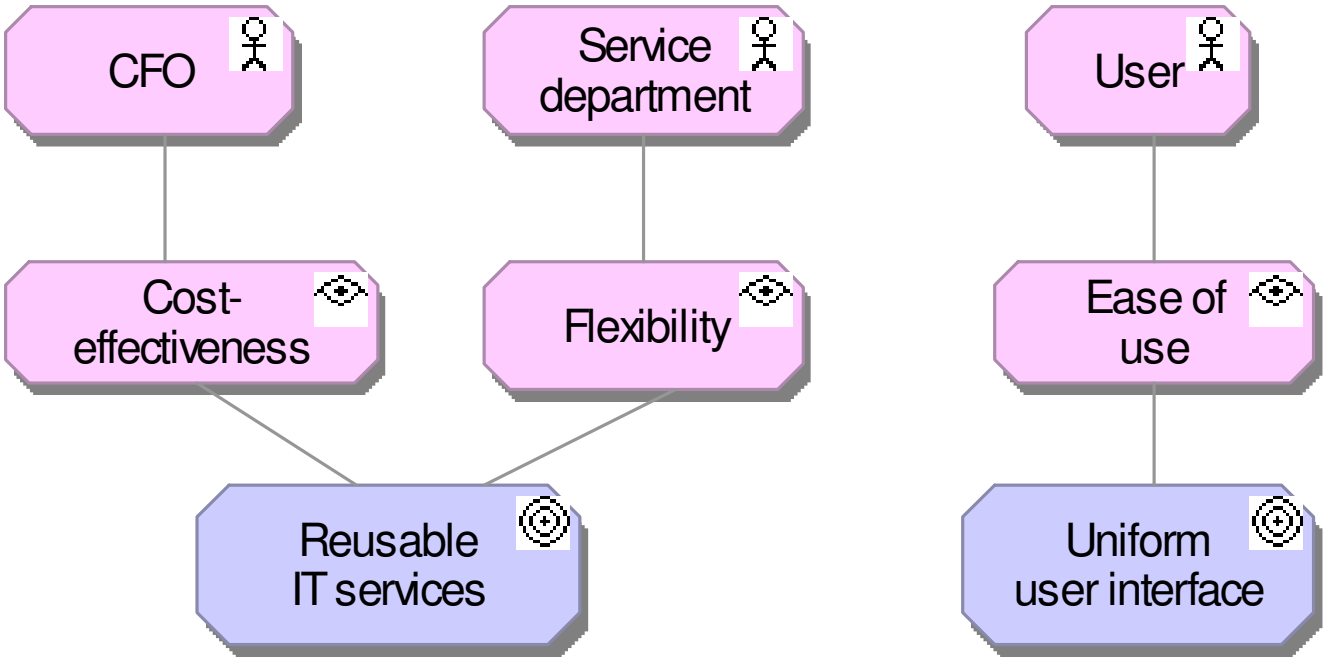
- Technology independence
- Ease of use

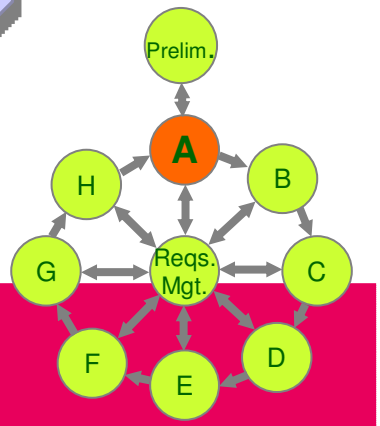
Technology principles

- Requirements-based change
- Responsive change management
- Control technical diversity
- Interoperability

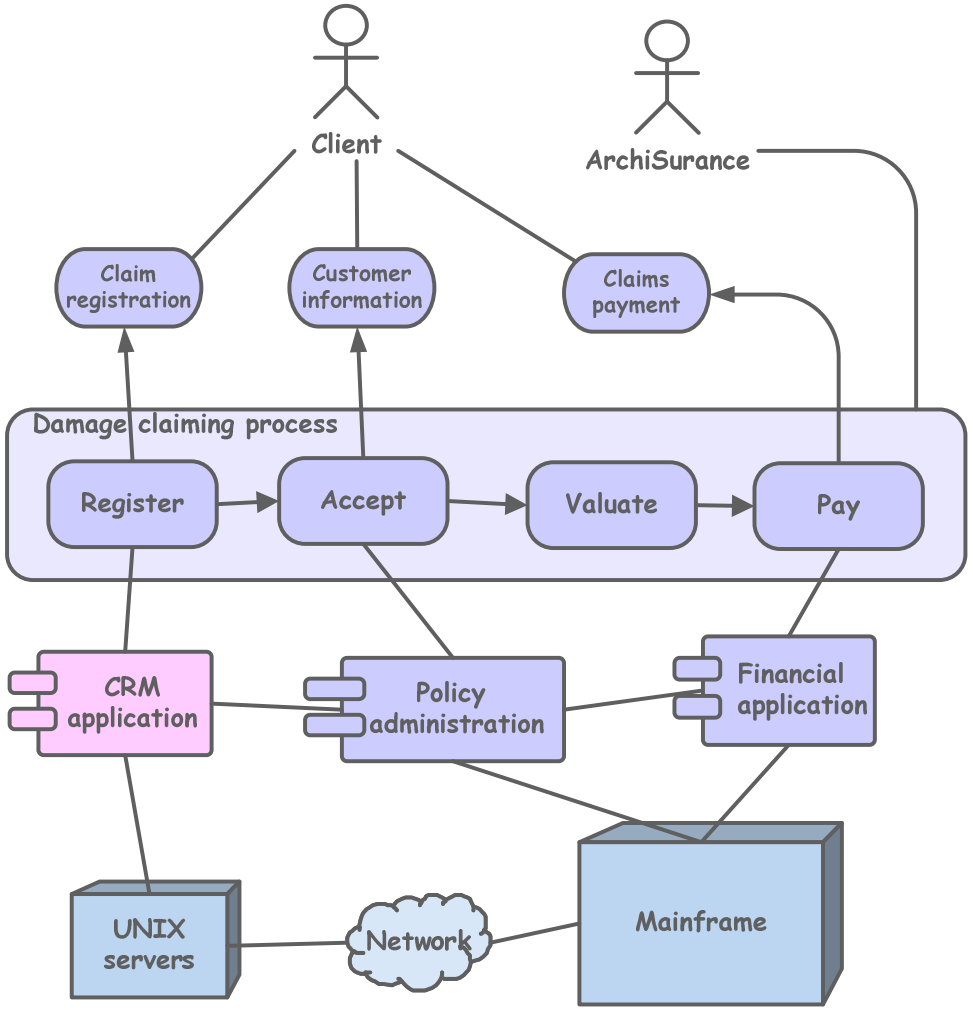


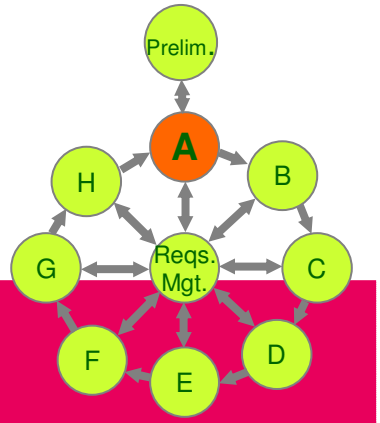
Stakeholders, concerns and business goals



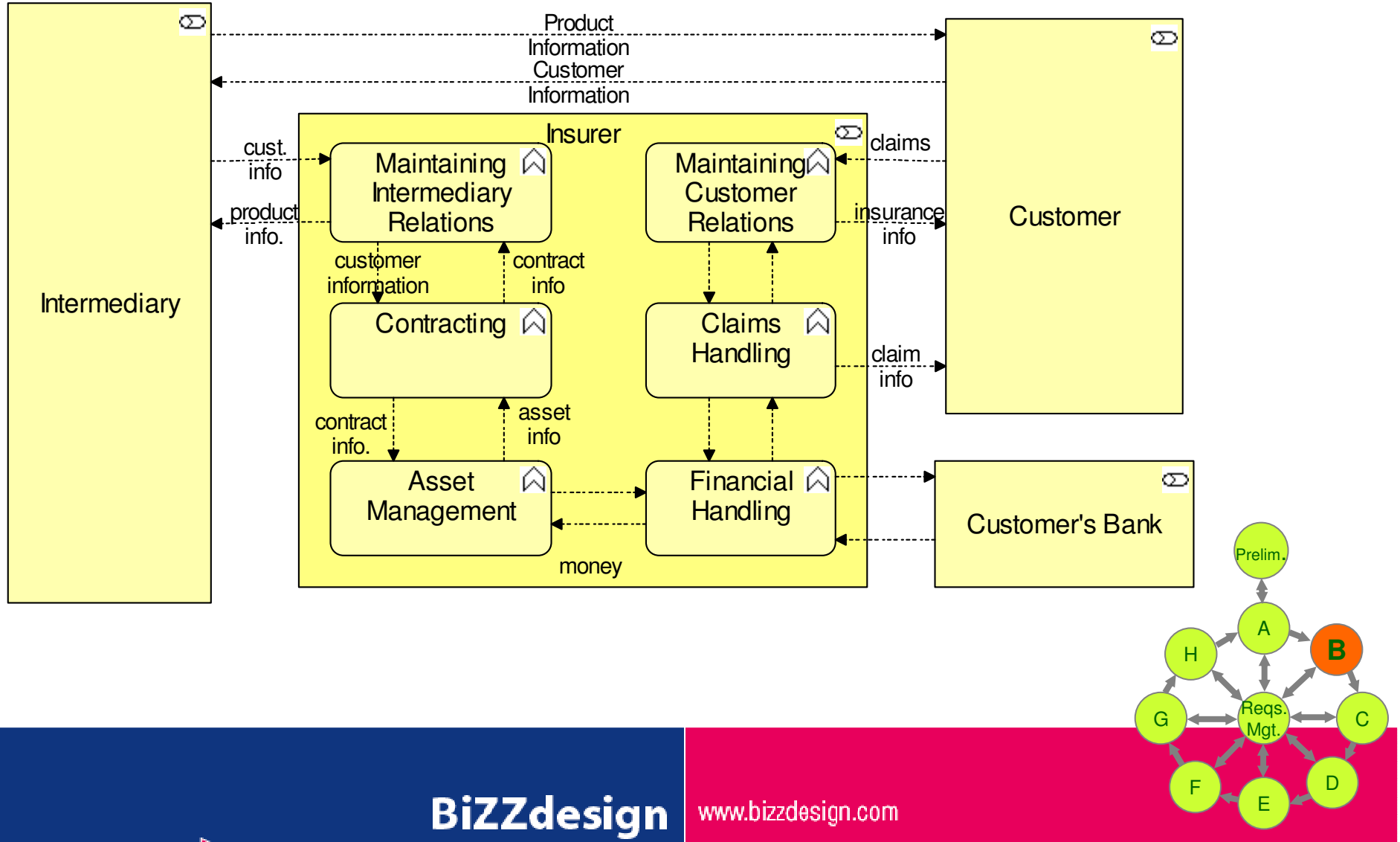


Architecture Vision

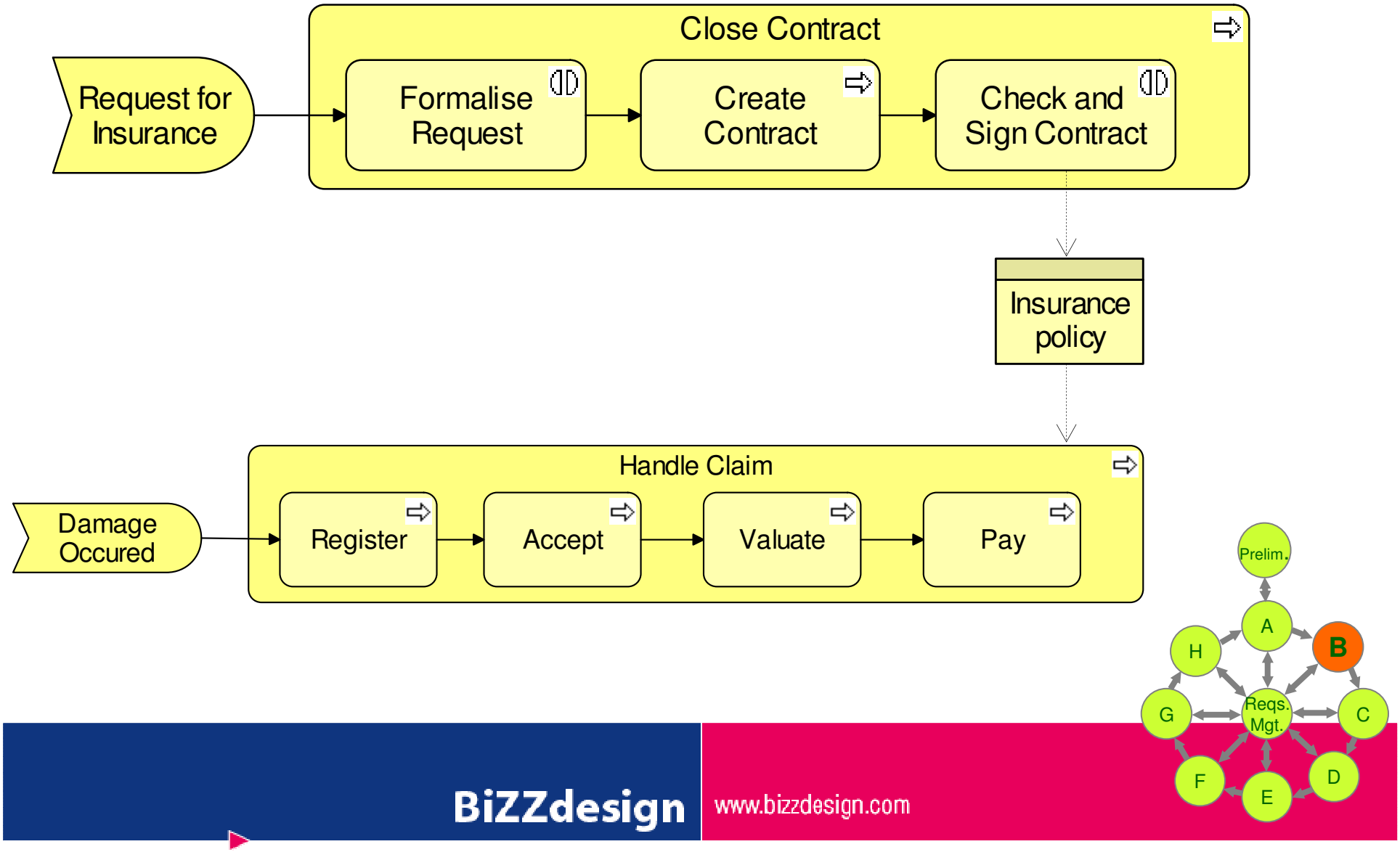




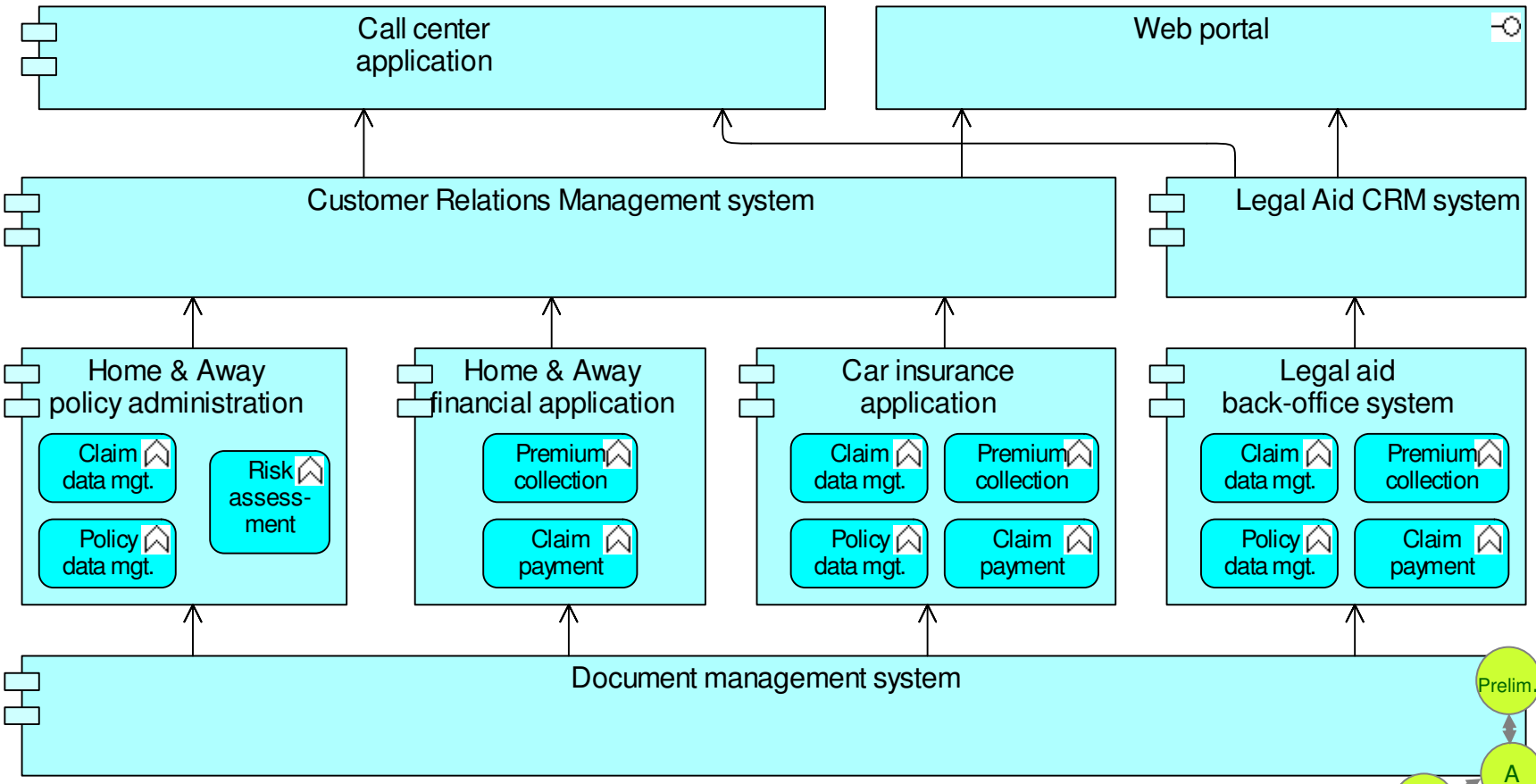
Baseline & target Business Architecture: Business Roles & Functions

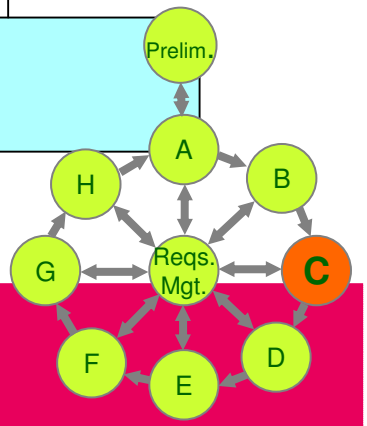


Baseline & target Business Architecture: Business Processes

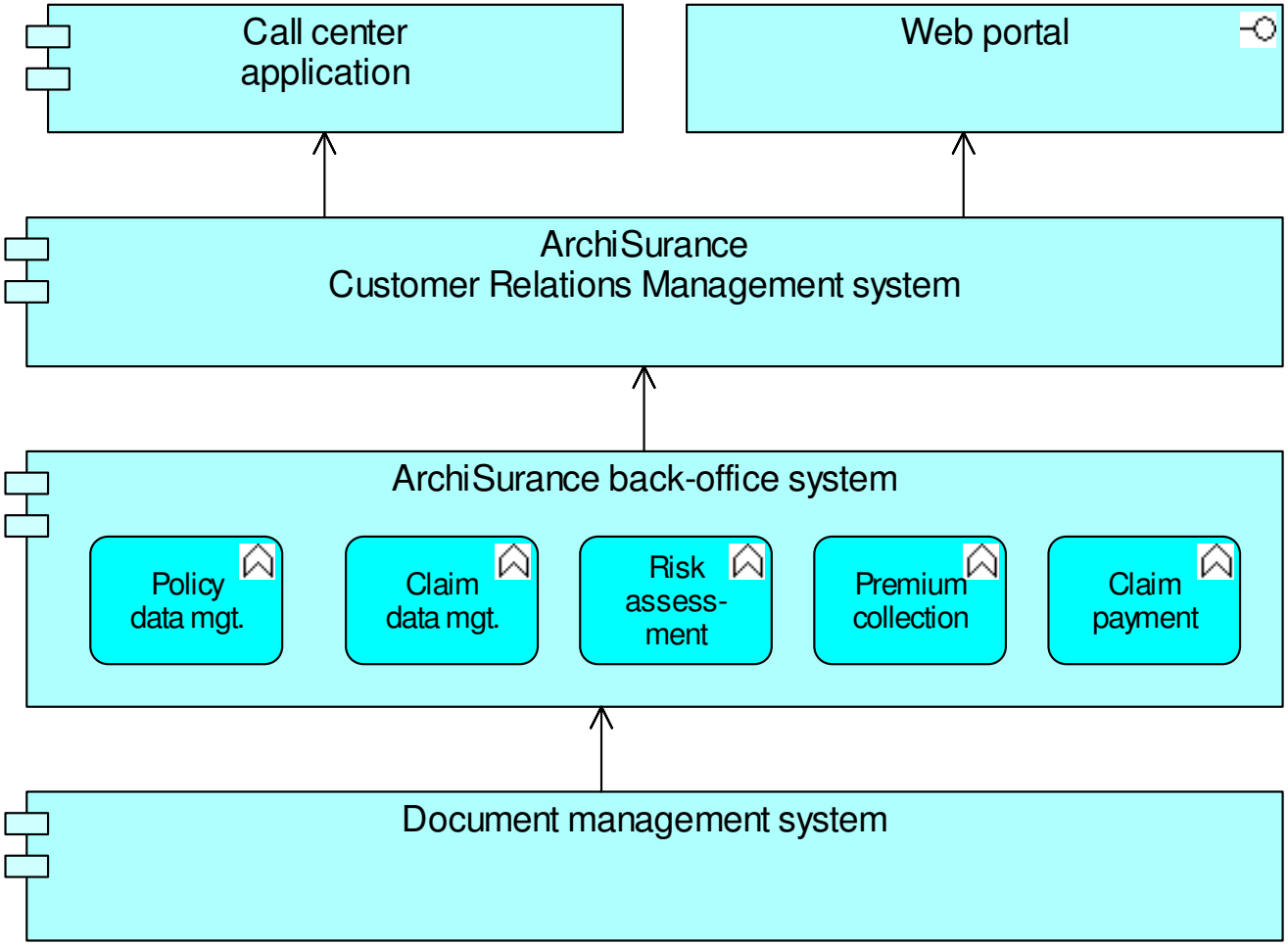


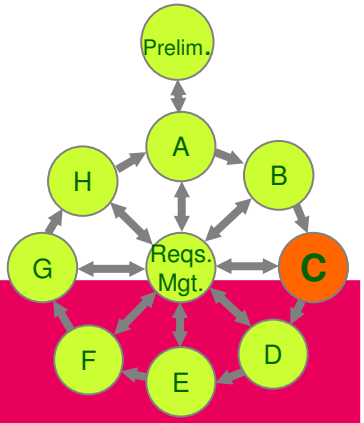
Baseline application architecture



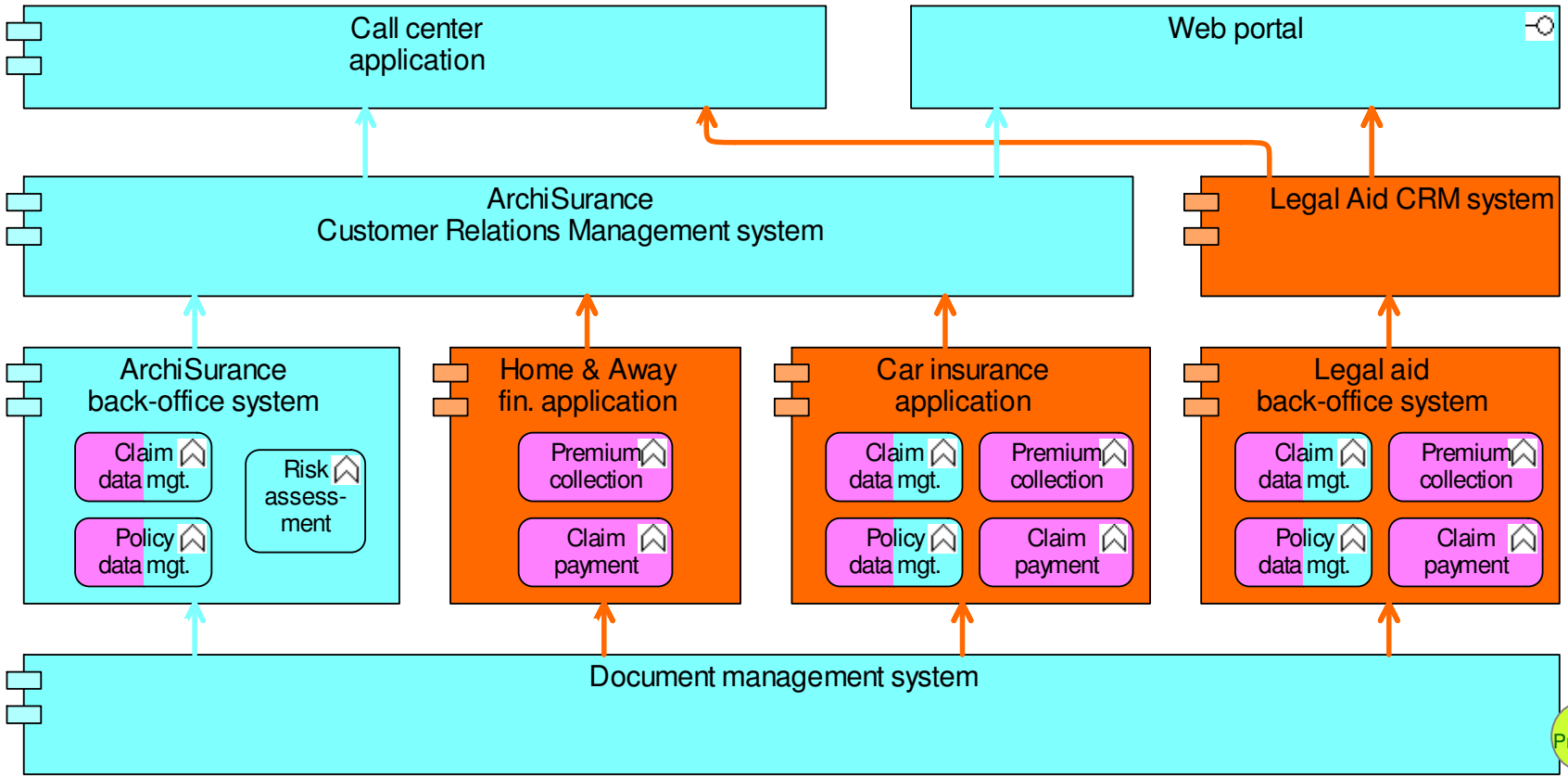


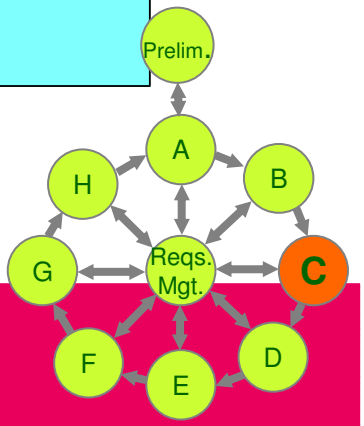
Target application architecture





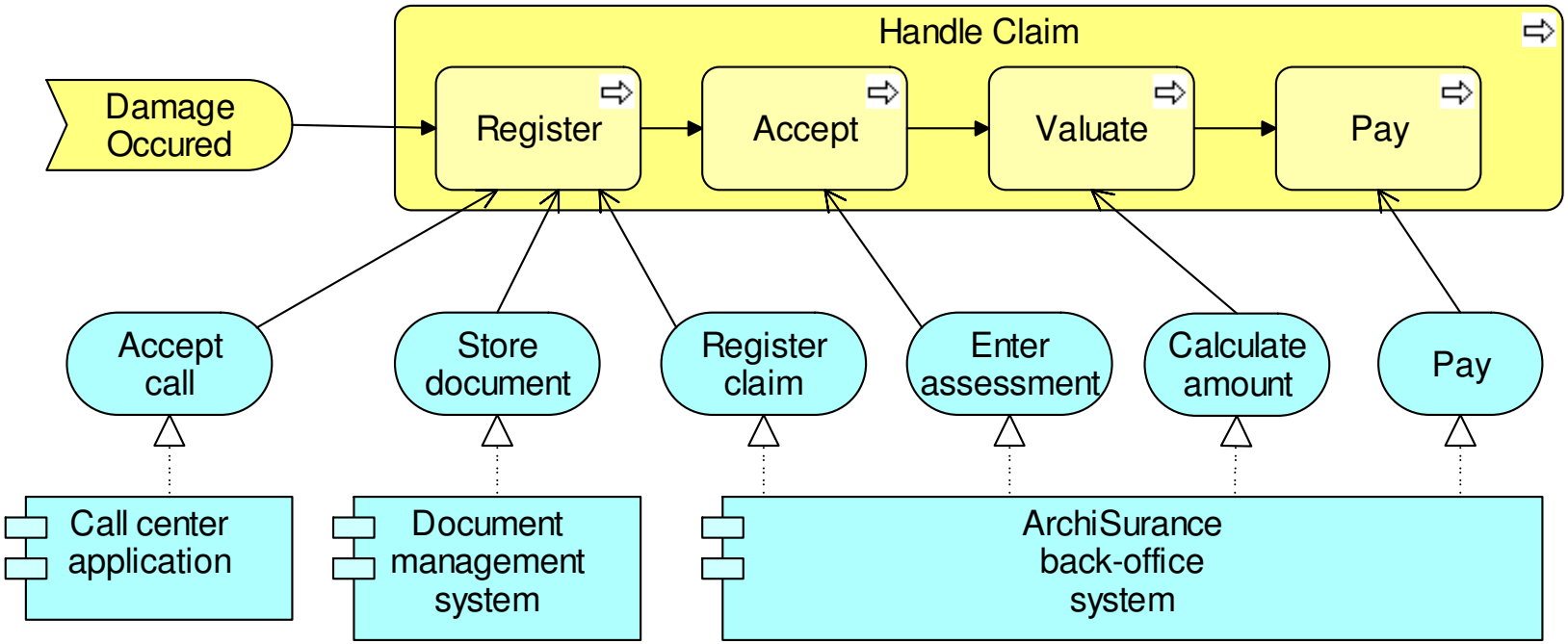
Gap analysis application architecture

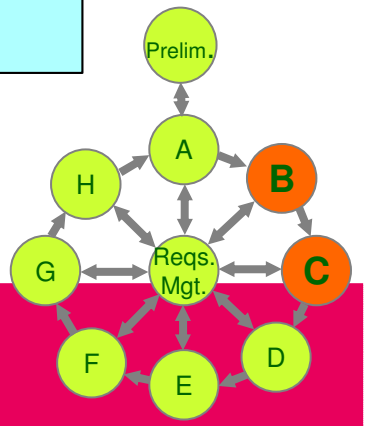




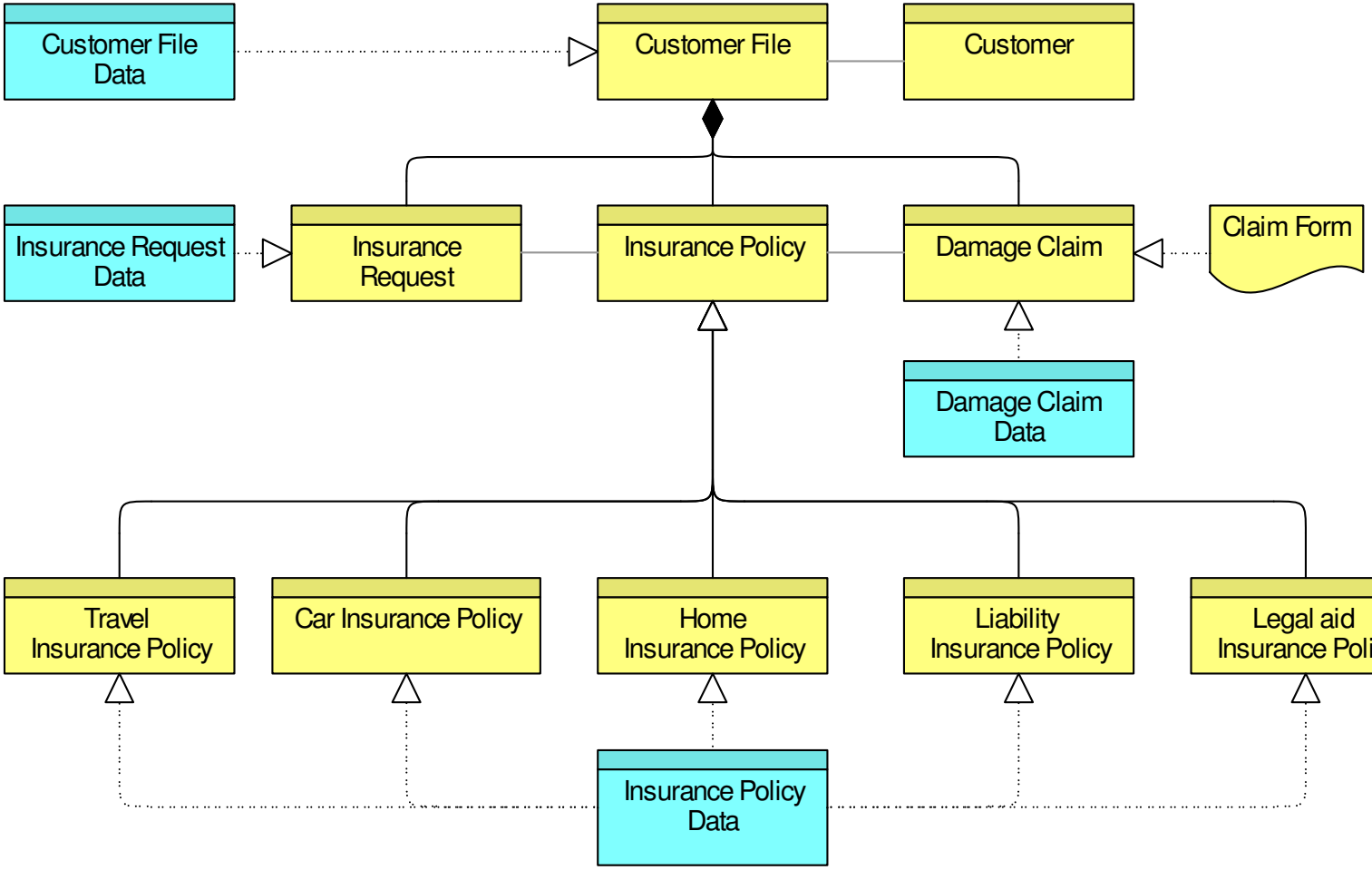
Business-application alignment

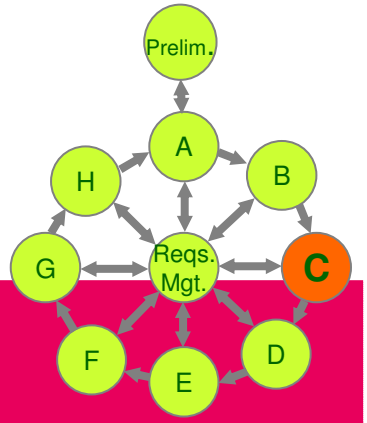
(Fragment, for the target architecture)



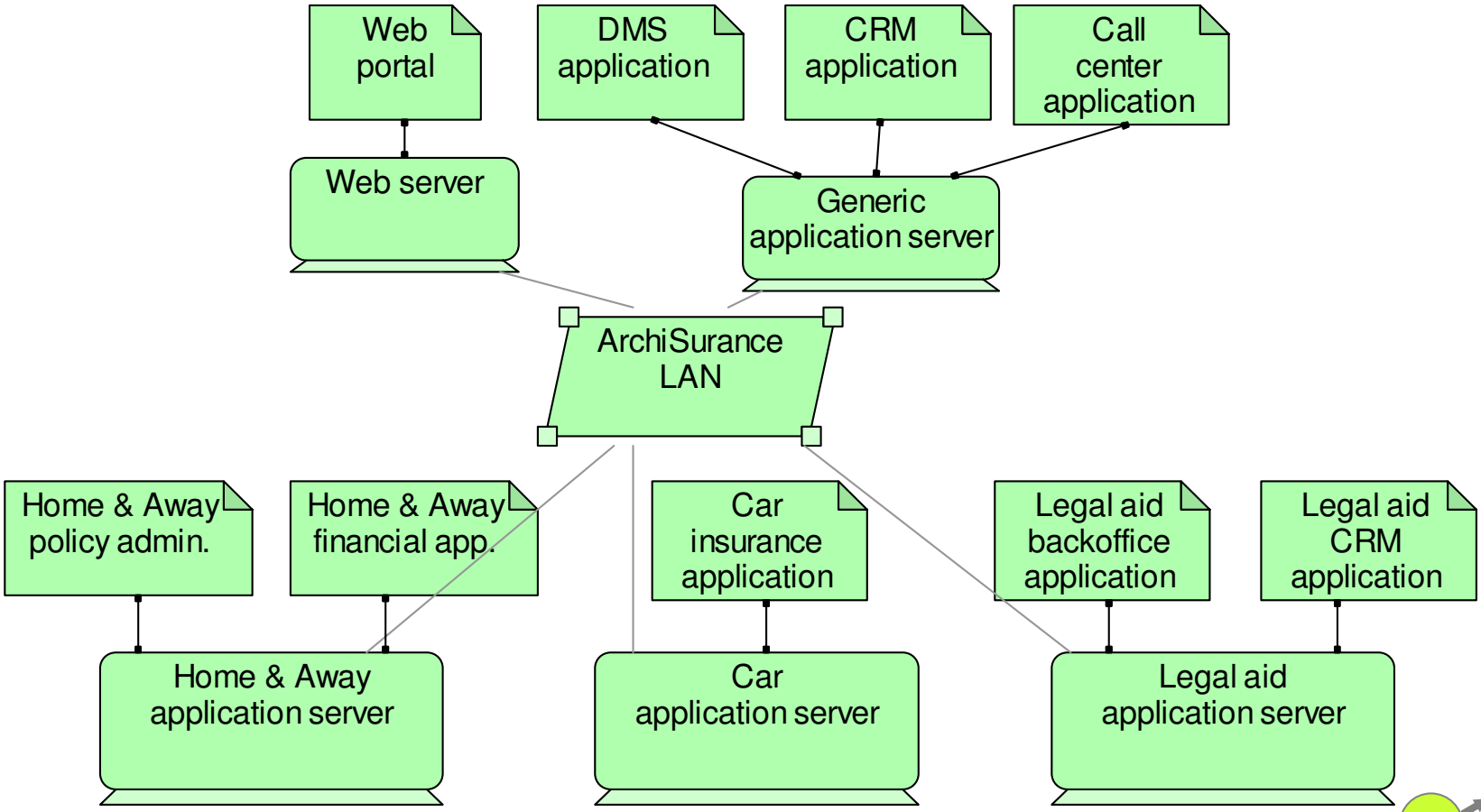


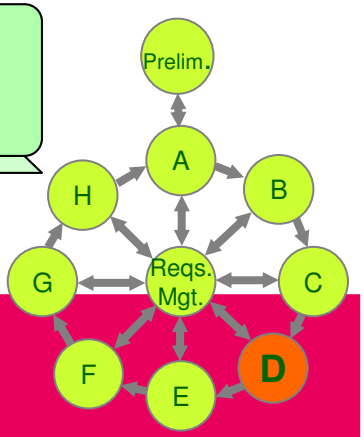
Baseline & target data architecture



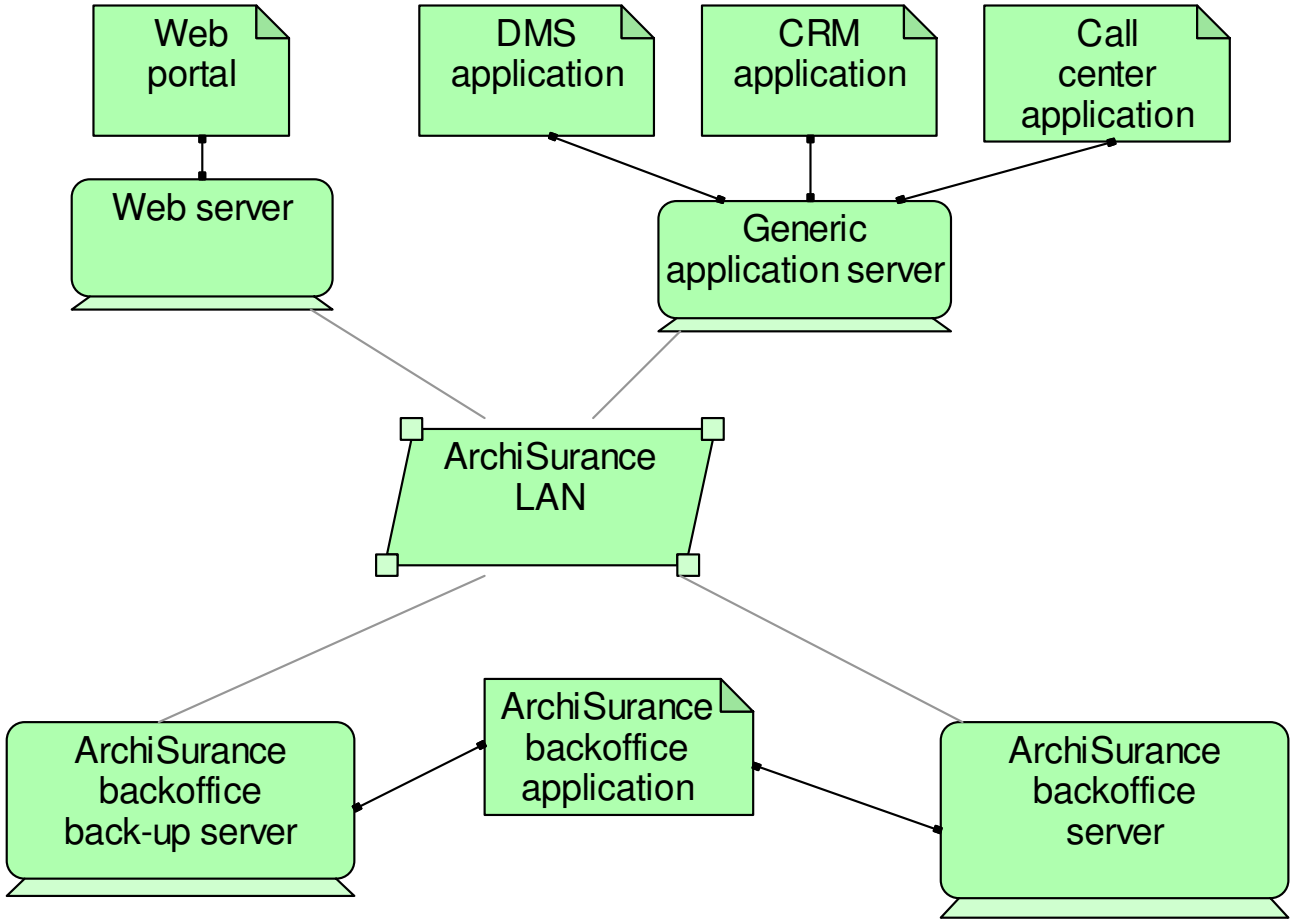


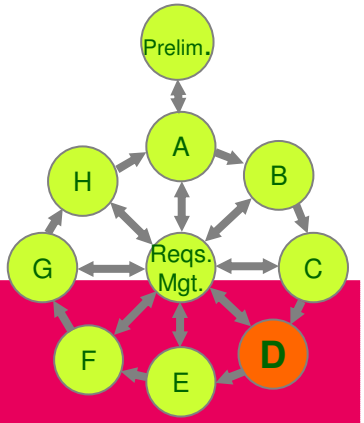
Baseline technology architecture



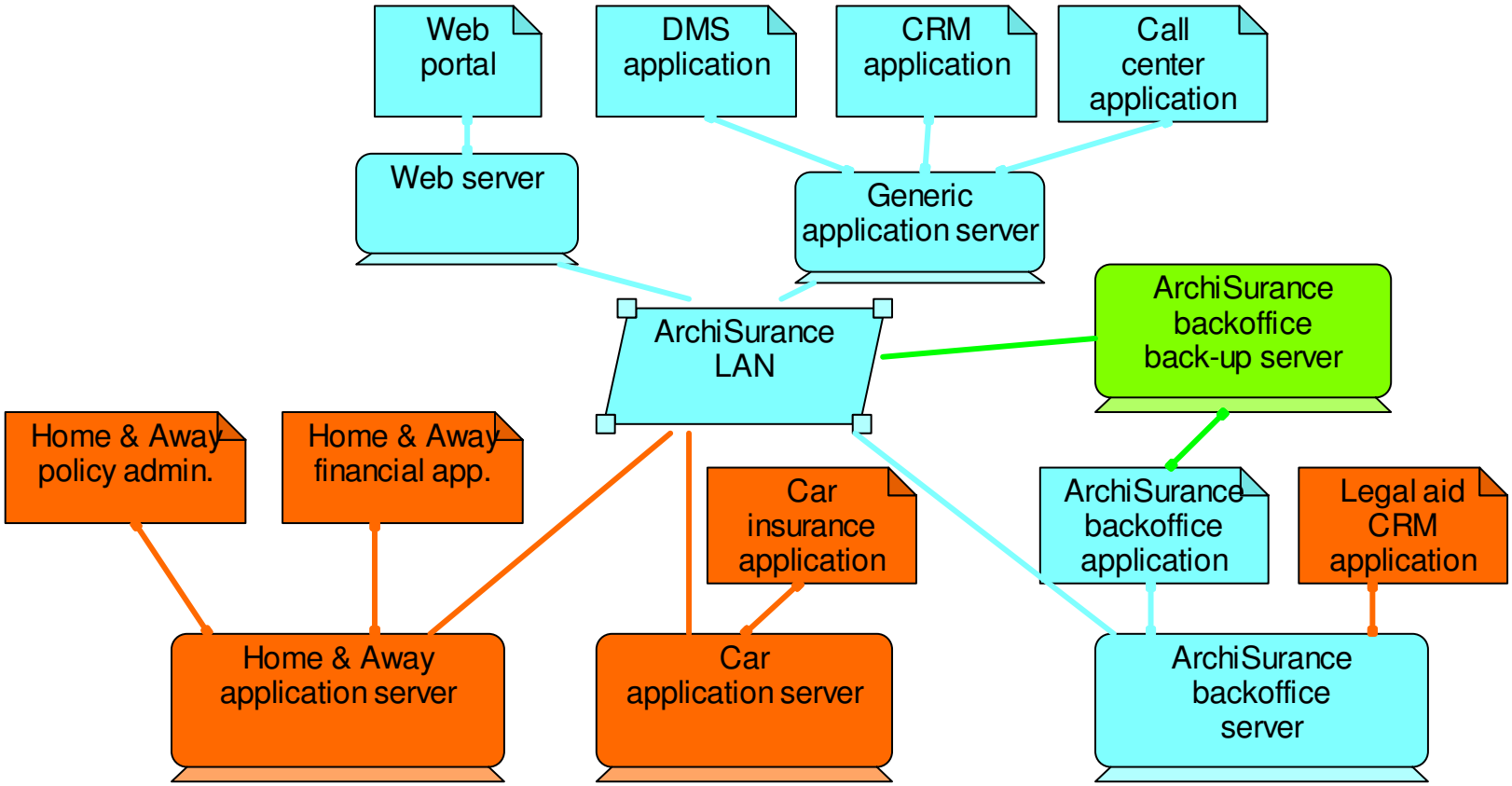


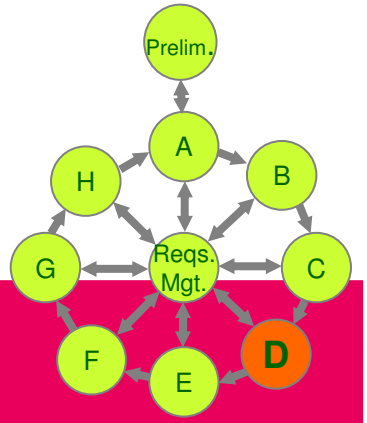
Target technology architecture





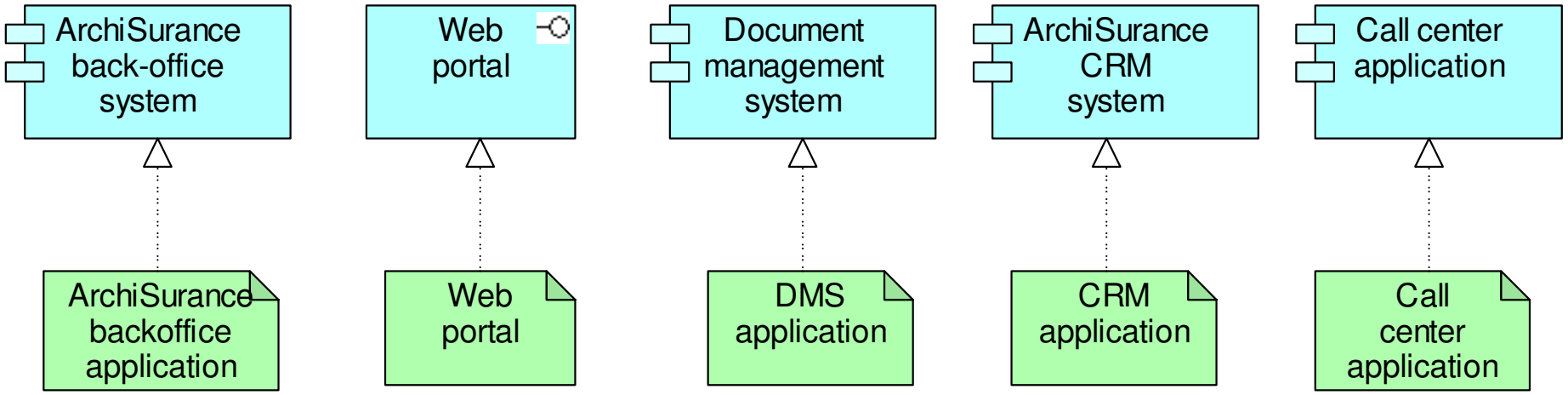
Gap analysis technology architecture

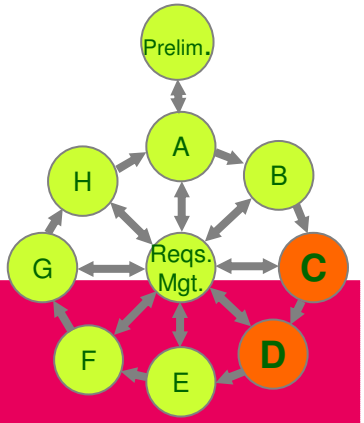




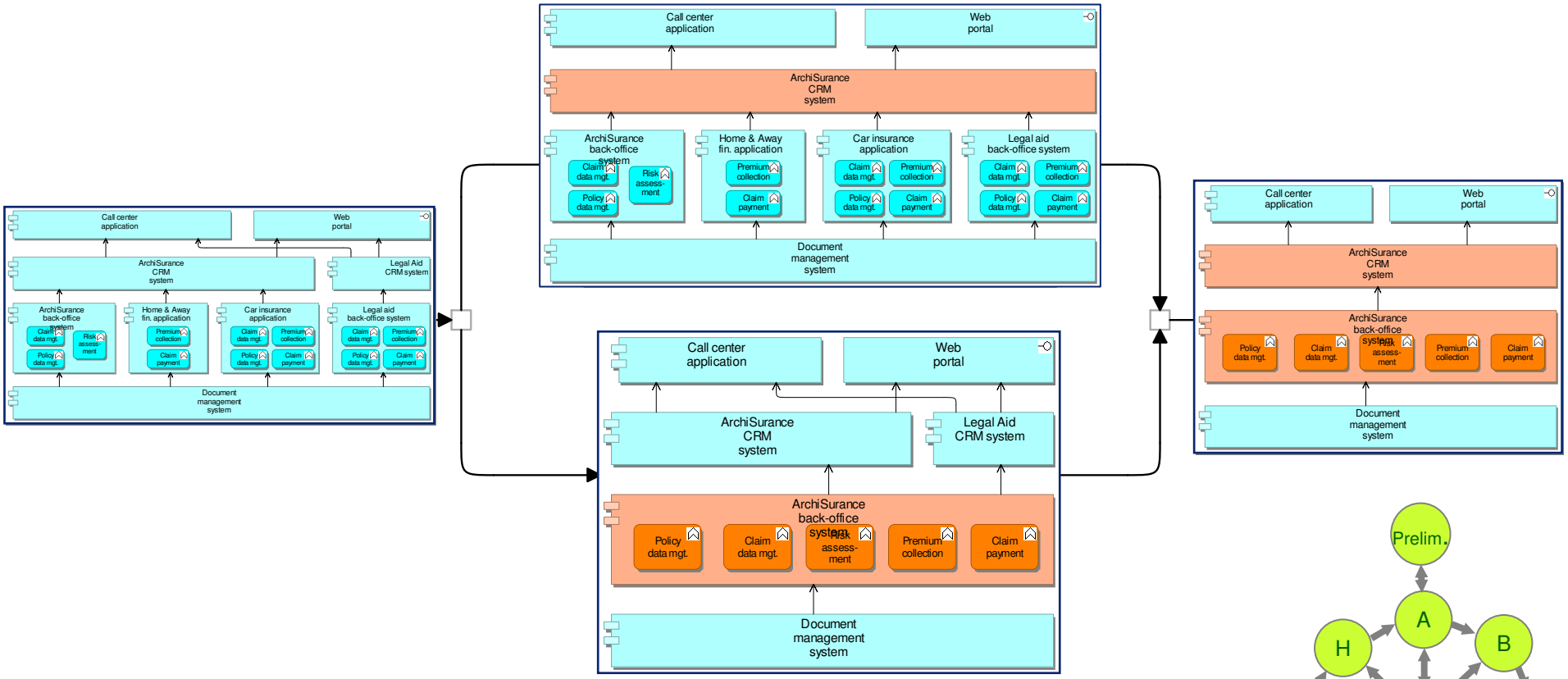
Application-technology alignment

(For the target architecture)

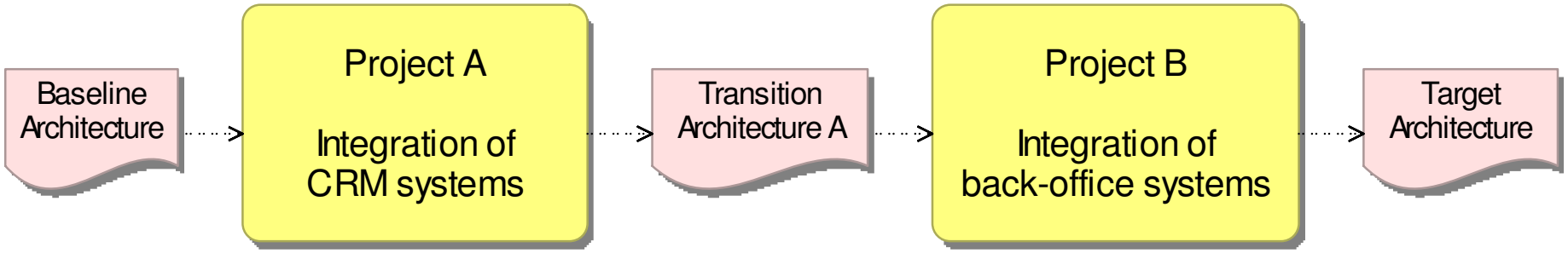


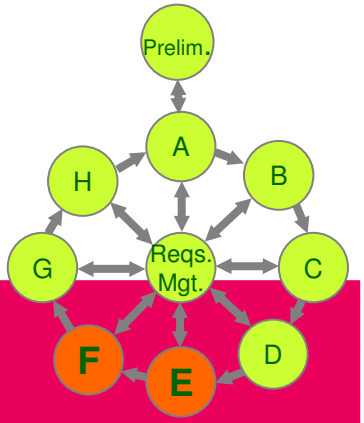


Transition architectures



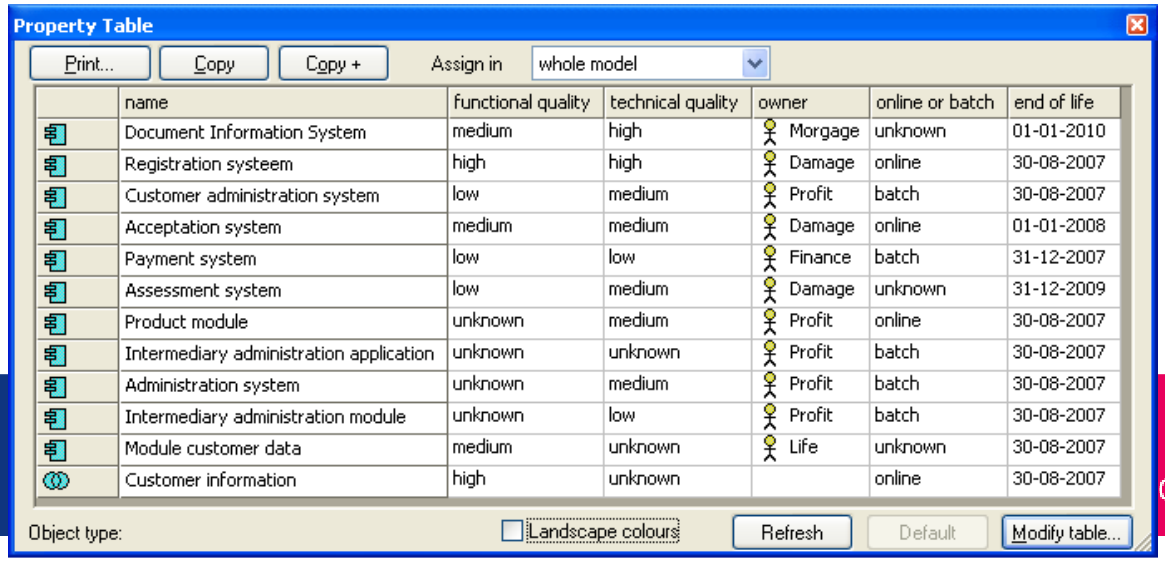
Projects

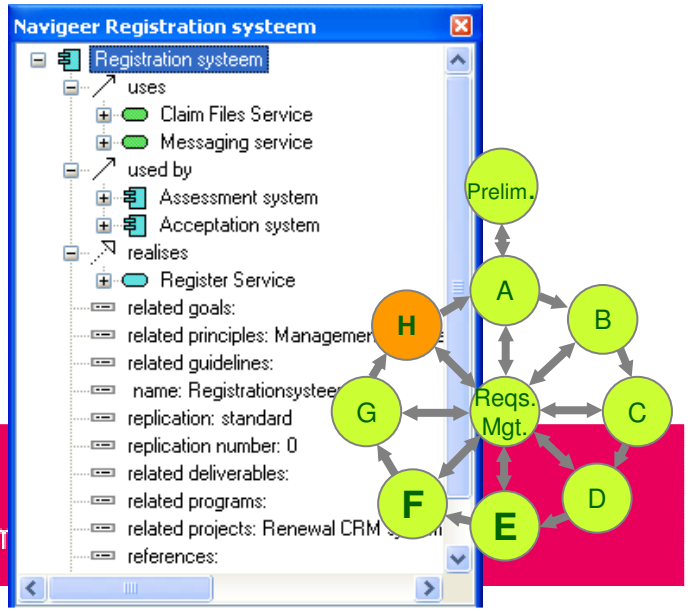

Baseline Architecture
Project A
Integration of CRM systems
Transition Architecture A
Project B
Integration of back-office systems
Target Architecture


Prelim.
A
B
C
D
E
F
G
H
Reqs. Mgt.

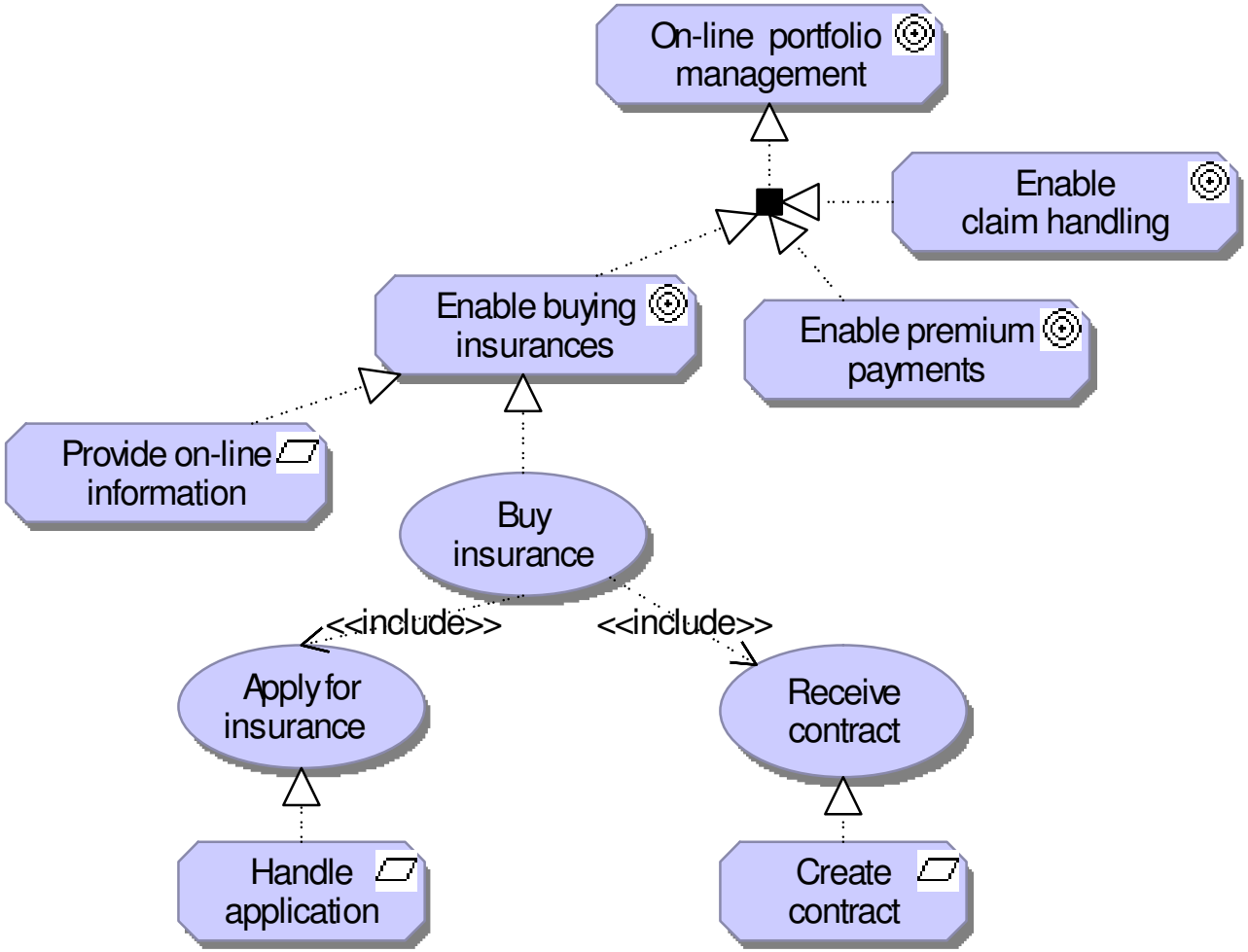
Analysis capabilities

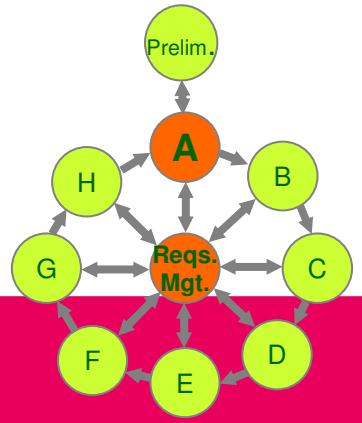
- Change management (in tools)
- Impact-of-change
- Where-used
- Visualizing objects and relations by generating views
- Visualizing properties using views (colour/label/tooltip/etc.)
- Giving overviews of properties using tables
- Navigation through objects and relations



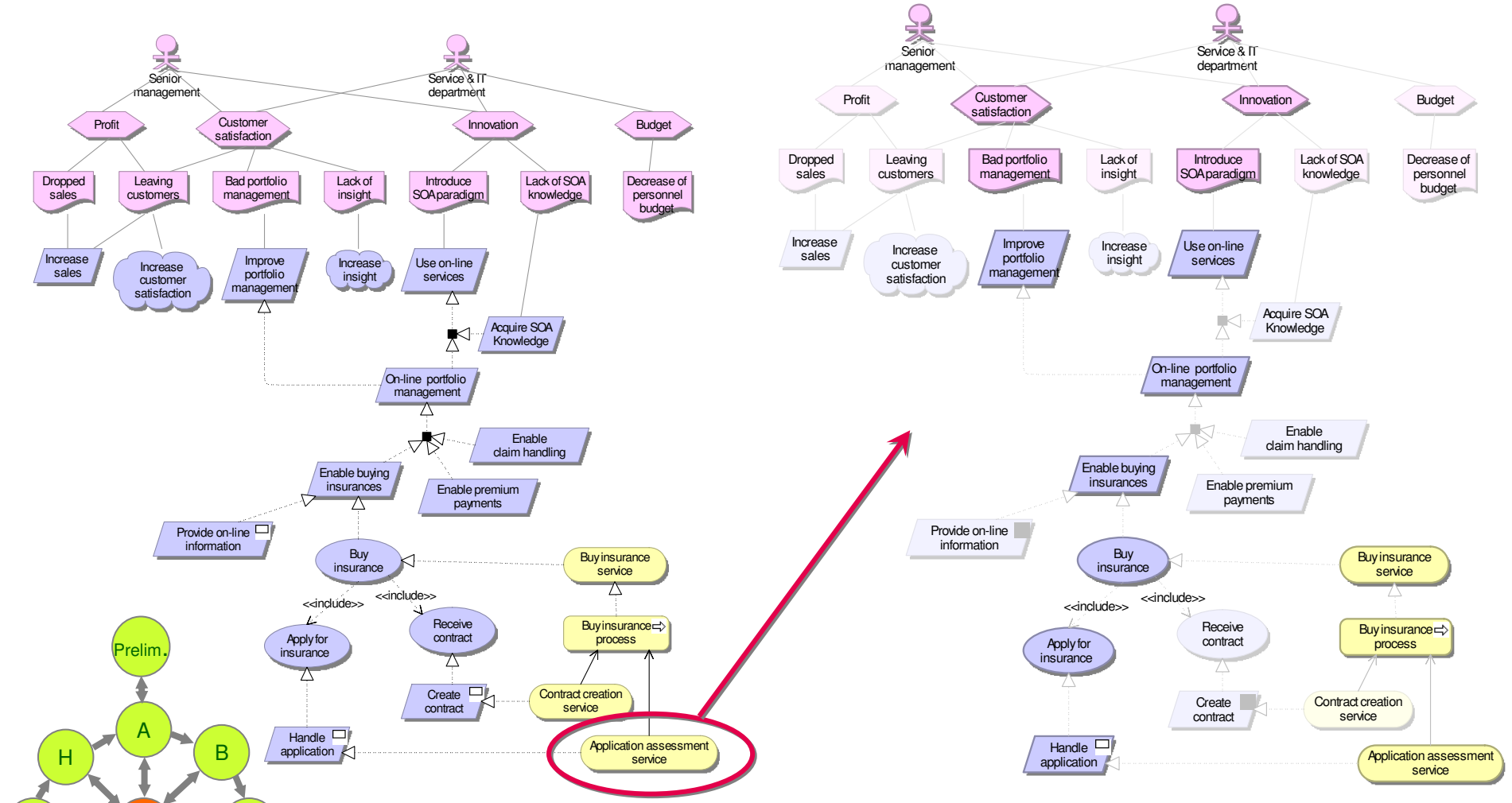


Requirements modelling



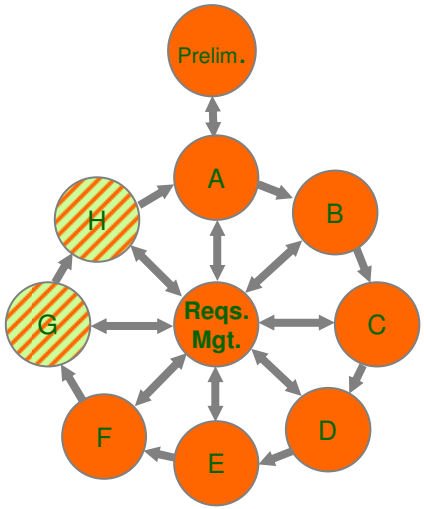


Requirements traceability



TOGAF and ArchiMate

- Supported by ArchiMate:
  - Business architecture
  - Application architecture
  - Data architecture
  - Technology architecture
  - Transition architectures



Ext.
ARCHIMATE®

- With proposed extensions:
  - Architecture principles
  - Stakeholders, concerns and business goals
  - Projects and deliverables
  - Requirements

ArchiMate adding value to TOGAF

- Integrated, consistent and coherent modelling in various phases
- Not just the circles, but also the relations between those
- Supports the service paradigm explicit
- Concrete, visible results for various stakeholders can be generated from the repository
- Analyses (e.g. impact-of-change and gap) made easy
- Re-use models, maintain in one place

TOGAF 9 + ArchiMate 1 = Value 10

(some of the) Organizations that benefit from ArchiMate

- Financial services, government, transport, construction, energy, utility, media, healthcare, social security, services and education
- Various case studies available

Benefits experienced

- "ArchiMate closes the gap between "free-format" strategy models and detailed solutions architecture models"
- Consistent and integrated modelling…
  - Is a kind of knowledge management
  - helps to integrate various (types of) models
  - enables stakeholder specific view generation
  - enables analyses
- Insight in the various domains **and** the relations between these
- Open standardno vendor lock-in
- "ArchiMate makes it easier to communicate with architects over organization boundaries, domain boundaries and from architect to designer"
- Ease of use, low complexity, step-by-step growth in advanced use

Some lessons learned

- Pilot ArchiMate to create real-life experience and work on a success story
- Create your own sub-set of the metamodel (31 x 10 is heavy)
  - Select and learn, extend if needed
- Train people to optimize benefit
- Integrate modelling effort with…
  - the EA process (TOGAF ADM or any other)
  - EA governance (Validate the models)
  - other modelling efforts (Process modelling, Software modelling
- Be aware that standardizing the language for EA can be an major chance for individual architects
  - Less/More formal
  - Less/More detailed
  - Focus changes from modelling one-time views to information gathering, model in a shared environment and generate views

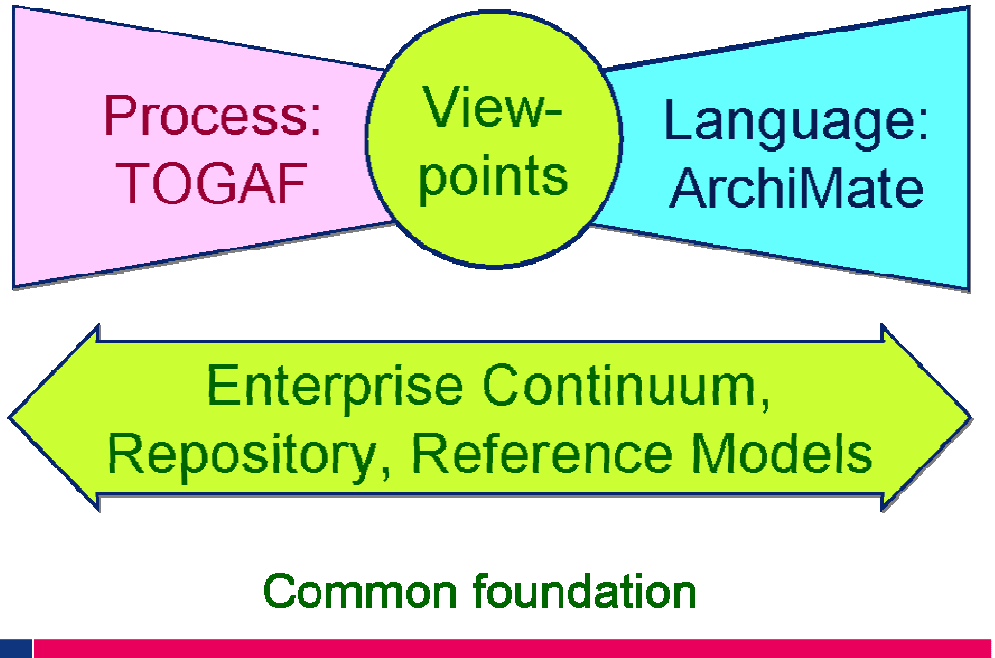
The future of ArchiMate

- Extensions
  - Requirements, principles, projects
- Further integration with TOGAF
- Formalizing relations with other languages
- More user groups
- Cases and user experiences
- Certification

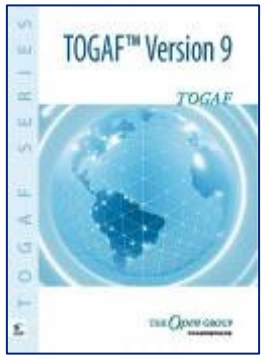
ArchiMate adding value to TOGAF

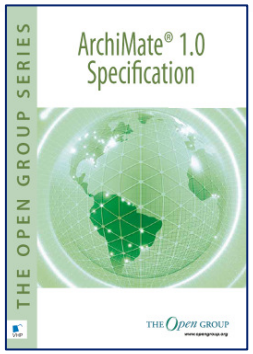
- Share the same definition of (Enterprise) Architecture
- Viewpoints as a central concept
- Both managed by The Open Group
- Good tool support is available
- Use of both is growing rapidly
- Gaps between ArchiMate and TOGAF will be closed
- Complement each other

THE Open GROUP
Making standards work®



More information…





- The Open Group
  www.opengroup.org
- ArchiMate
  www.opengroup.org/archimate
  www.archimate.org
- TOGAF 9
  http://www.opengroup.org/architecture/togaf9-doc/arch/
- ArchiMate 1.0
  http://www.opengroup.org/archimate/doc/ts_archimate/

Thank you!

THE Open GROUP
Making standards work®

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