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# EA Anamnesis: Towards an approach for Enterprise Architecture rationalization

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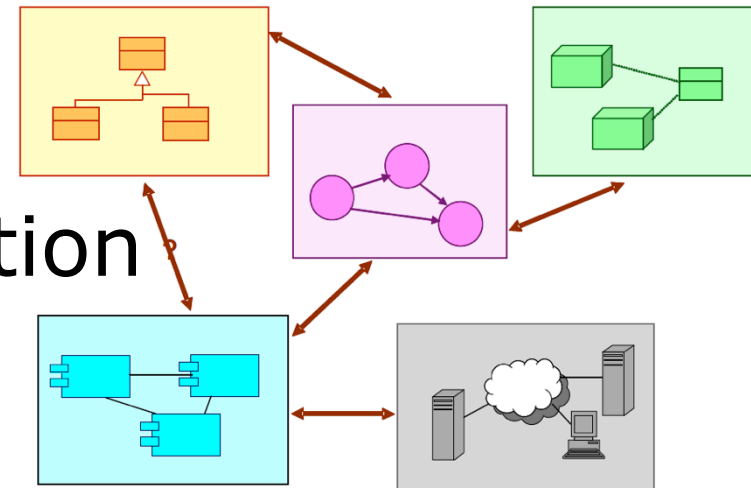
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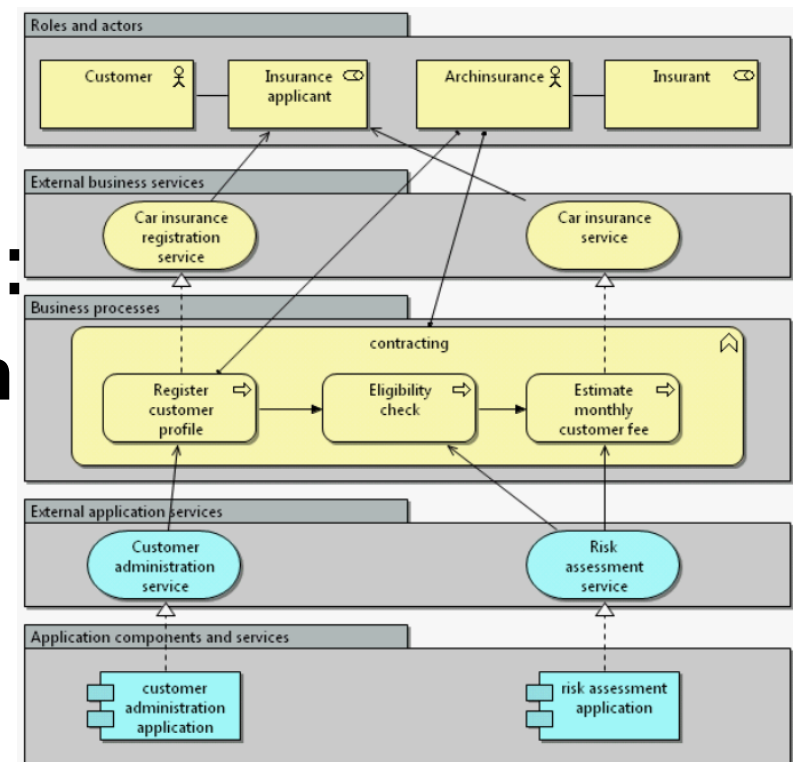
# Enterprise Architecture

- A design that shows the **coherence** between products, processes, organization, information supply and IT infrastructure [11][5]



# Modeling EA with ArchiMate

- Open Group standard DSL for EA modeling [4]
- Provides a layered view of the Enterprise:
  - **Business, Application** and **Technology** layer
- Each layer is:
  - self contained
  - integrated with other layers
- Captures design **but not** design rationale



# Problem of EA Amnesia (1/2)

- EA modeling languages capture ***what*** was done.
- What about ***why?***
- Rationale and alternatives that original architect considered during design process are lost over time

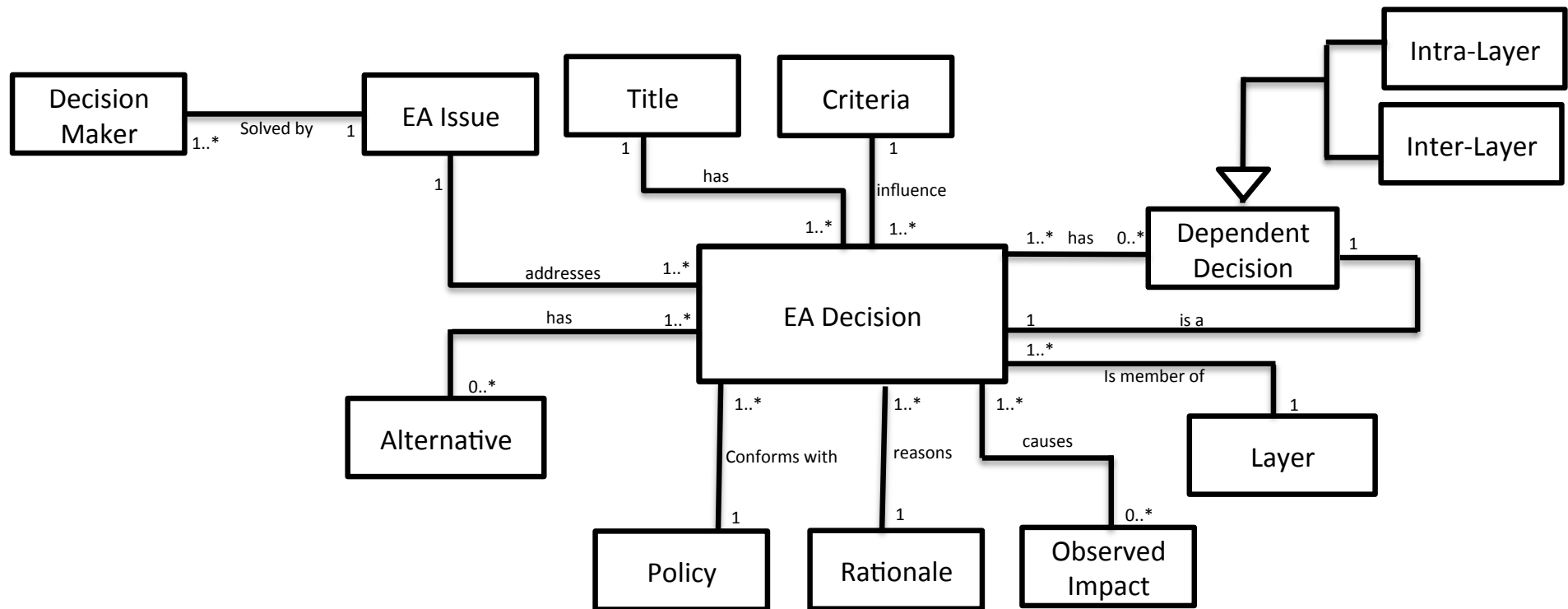
# Problem of EA Amnesia (2/2)

- Lack of design rationale causes:
  - No justification of past decisions [6]
  - Design integrity issues (constraints from past are not taken into consideration) [15]
  - Limited understandability of existing Architecture [16]
  - Limited traceability to business requirements [16]

# EA Anamnesis approach

- Anamnesis (*ἀνάμνησις*) denotes memory, history
- DSL that extends EA modeling languages
- Reducing architectural knowledge gap by **ex-post** capturing decisions and their rationales
- **Grounded on** Software Architecture rationale approaches [6,15,16,7,13]
  - Decision Representation Language [9]
  - – Decision Dependency Trees [12]

# EA Anamnesis metamodel

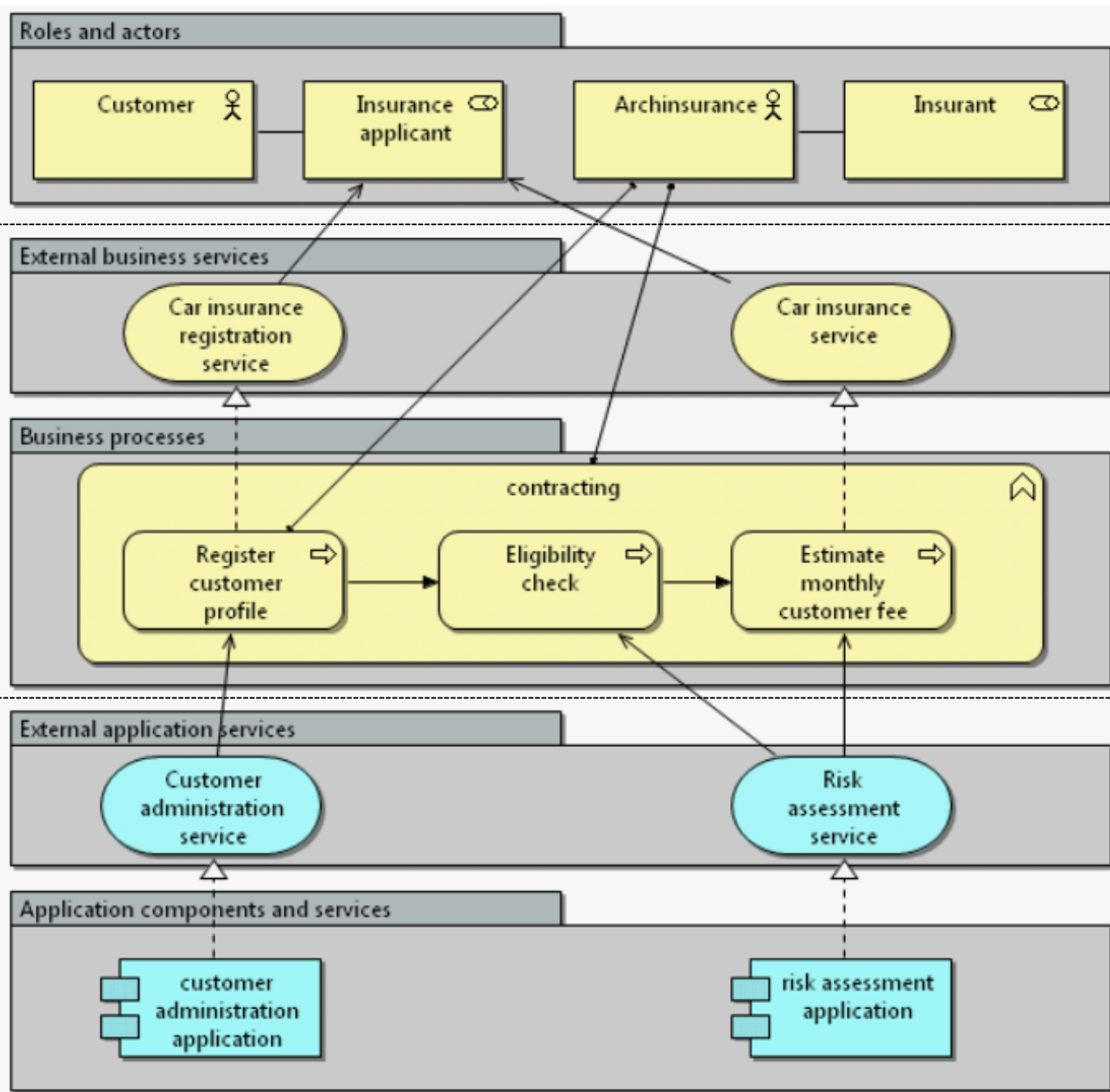


# Illustrative example

- ArchiSurance transformation intermediary
- 2 architects (John, Bob)
- John did and modeled the actual transformation
- John, using EA Anamnesis, captured the rationale
- Bob (a new hired EA Architect) uses EA Anamnesis to efficiently understand and justify the as-is  
○ architecture



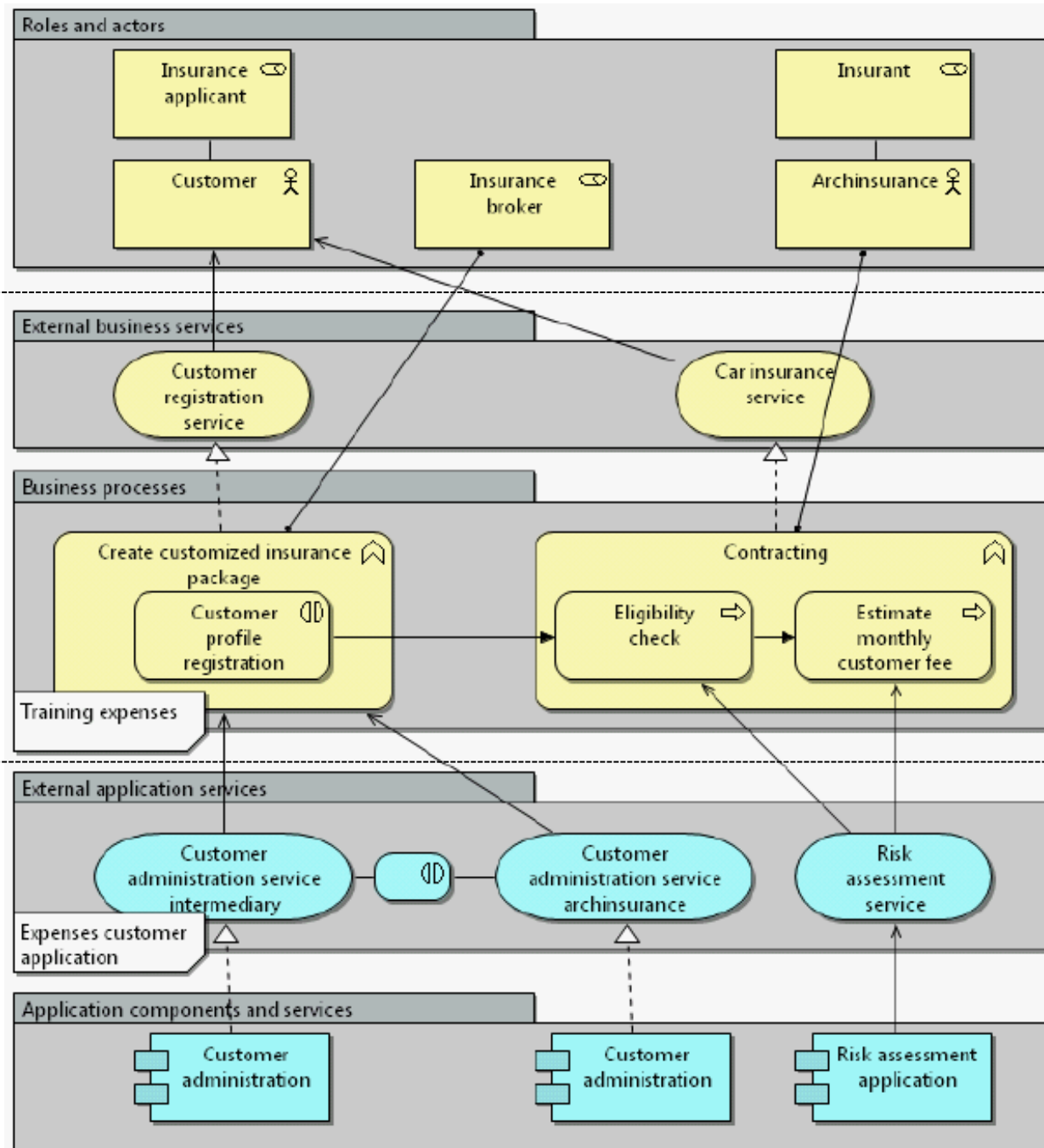
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ArchiSurance direct-to-customer EA model

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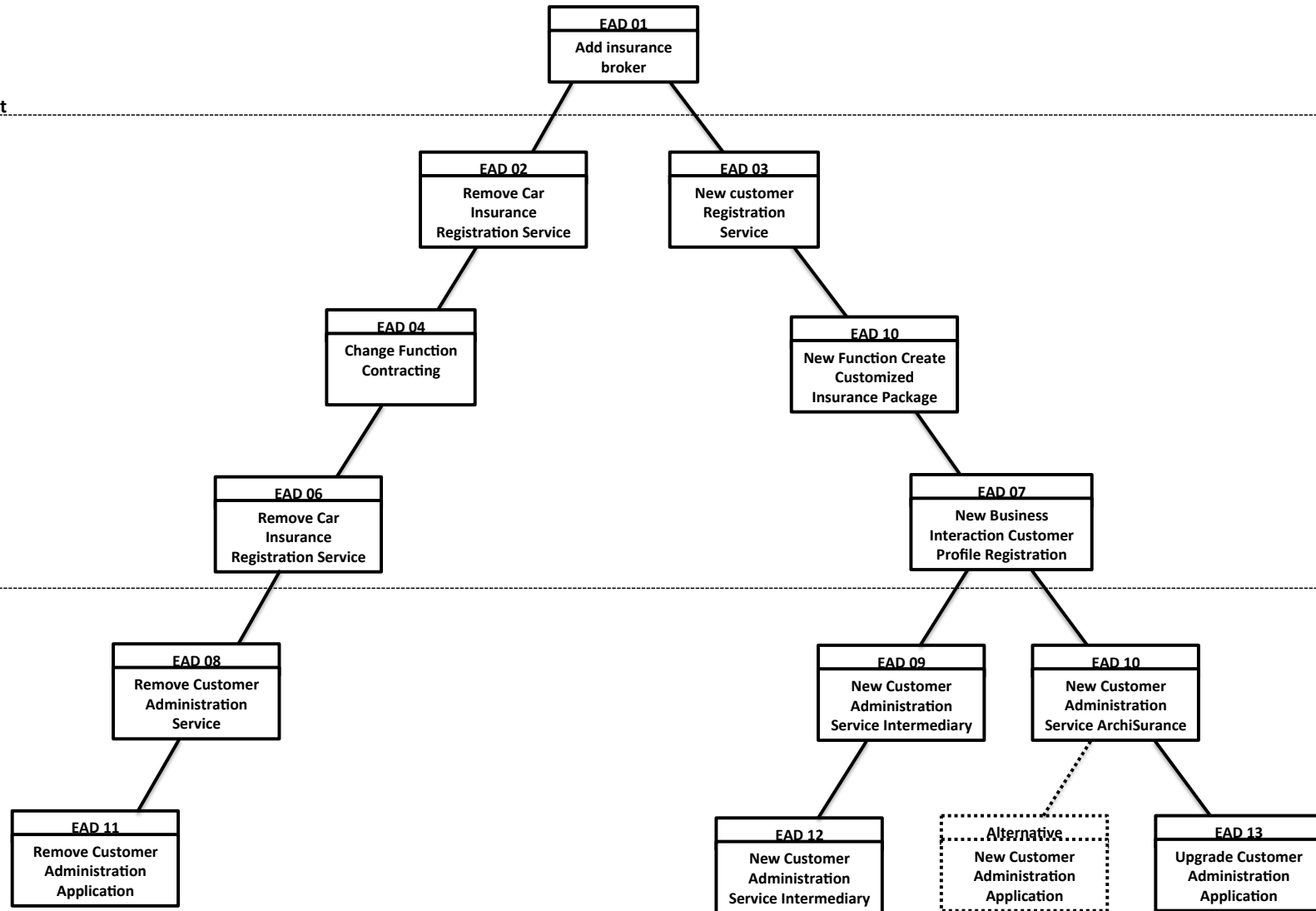
ArchiSurance intermediary EA model

# Decision Dependency Tree

Environment

Business

Application

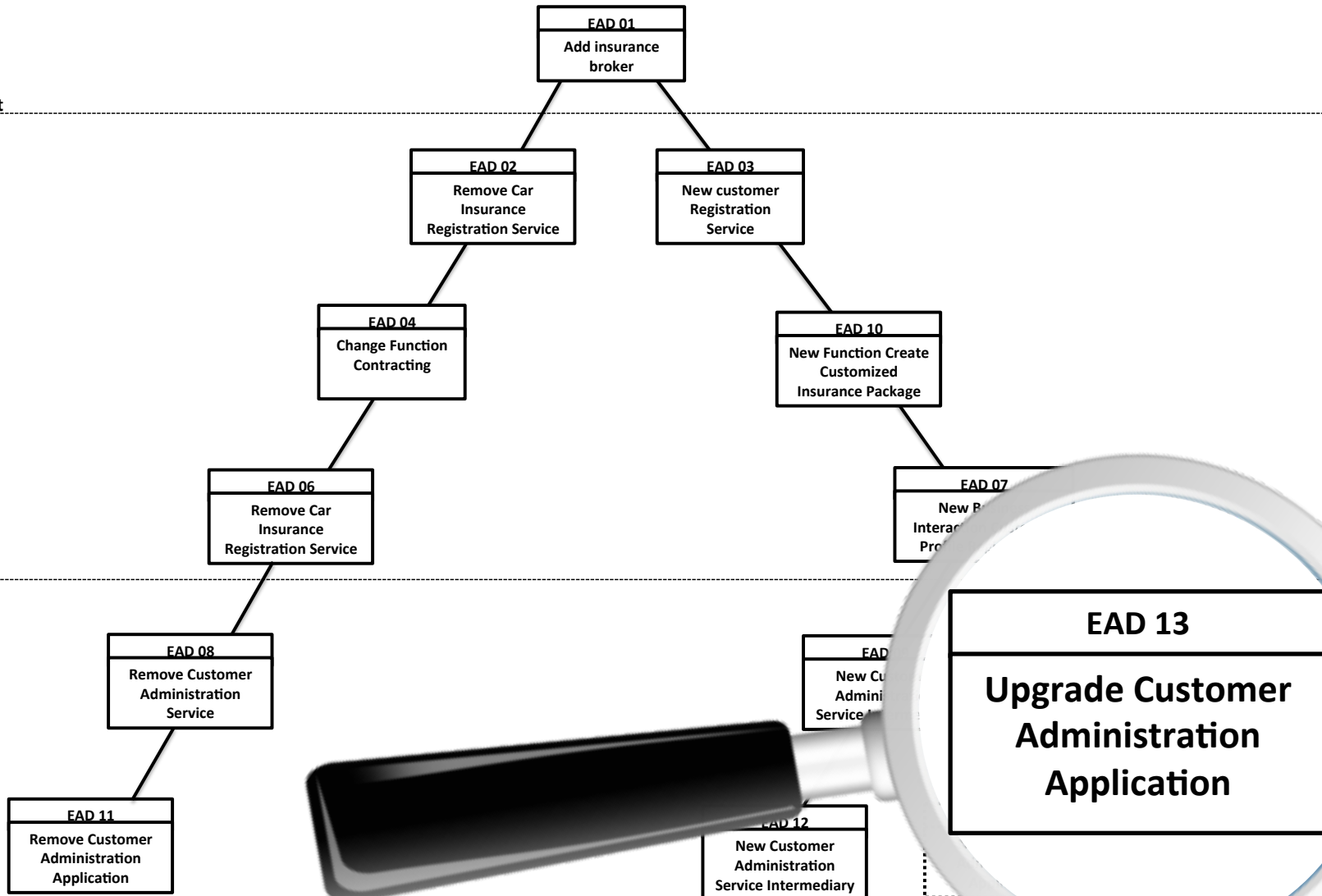


# Decision Dependency Tree

Environment

Business

Application



<b>Title:</b>	Upgrade of customer administration application
<b>EA issue:</b>	Current version of customer administration application isn't capable to support maintenance and customers administration of intermediaries application service
<b>Decision Maker:</b>	John
<b>Layer:</b>	Application
<b>Intra-Layer dependent Decisions:</b>	EA Decision 10
<b>Inter-Layer dependent Decisions:</b>	None
<b>Alternatives:</b>	Acquire Common of the shelf application
<b>Rationale:</b>	With the upgrade we maintained the existing Application GUI for responsible users of customer registration department. Users should only be trained to use the additional parts, the upgraded application provides, regarding customer information of intermediaries
<b>Criteria:</b>	Reduced Risk, Downtime
<b>Policy:</b>	Cost reduction
<b>Observed Impact:</b>	Business Layer: Increased adaptability to the new business process model because people from customer registration department just learned to work with the new information workflow model without having to use a different application

**EA Decision 13 table**

# Summary

- EA Anamnesis is a DSL that aims to play the role a Knowledge Management Based Decision Support System (KM-DSS) for EA
- EA Anamnesis metamodel represents important rationalization and dependency details of EA decisions

# Future work:

- How we extend the metamodel to identify and capture **decision making strategies**? (compensatory, non-compensatory, etc)
- How can we support decision making during design process (**a-priori**)?
- Is the return of modeling effort of EA Anamnesis sufficient?

# References

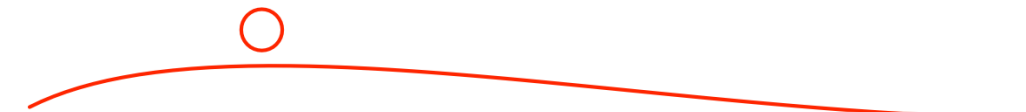
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# Thank you for your attention

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