

Business Decision Management – Business Decision Maturity Model BDMM

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Business Process Management

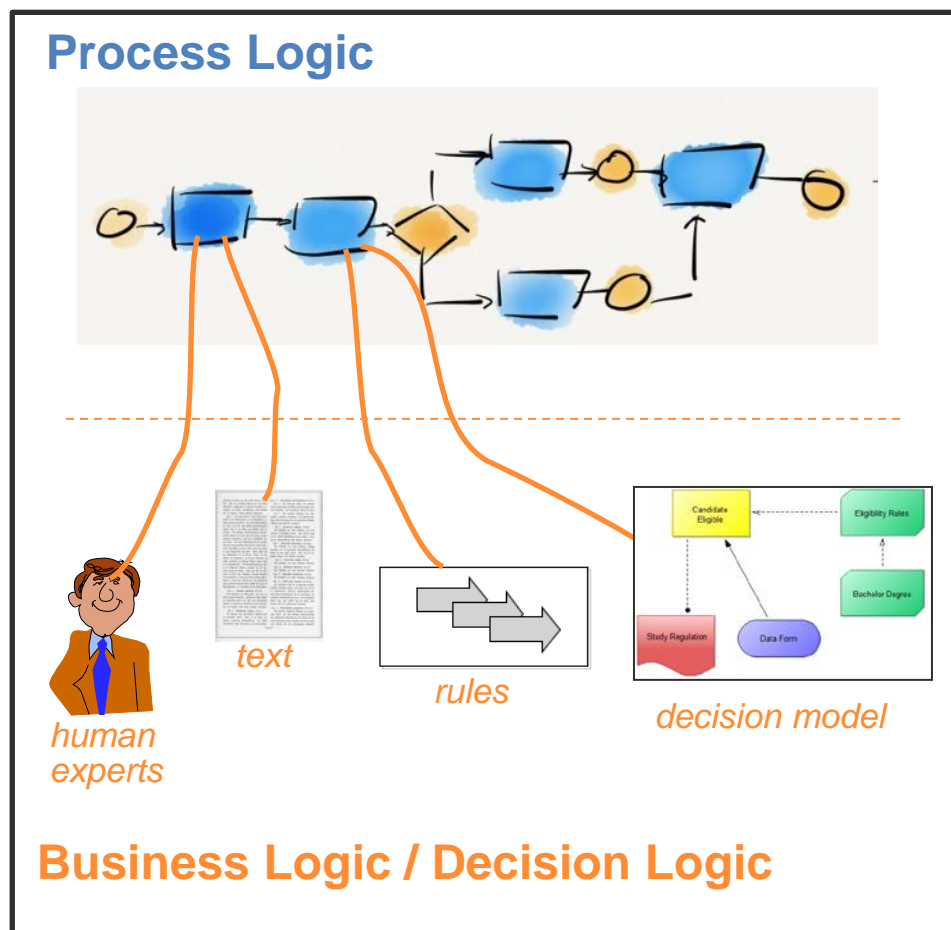
Business Decision Management

Knowledge Management

- Business Process Management
 - ◆ Management of Process Logic
 - ◆ Management of Decision Logic
(= Business Decision Management)

Business Process Management and Decision Management

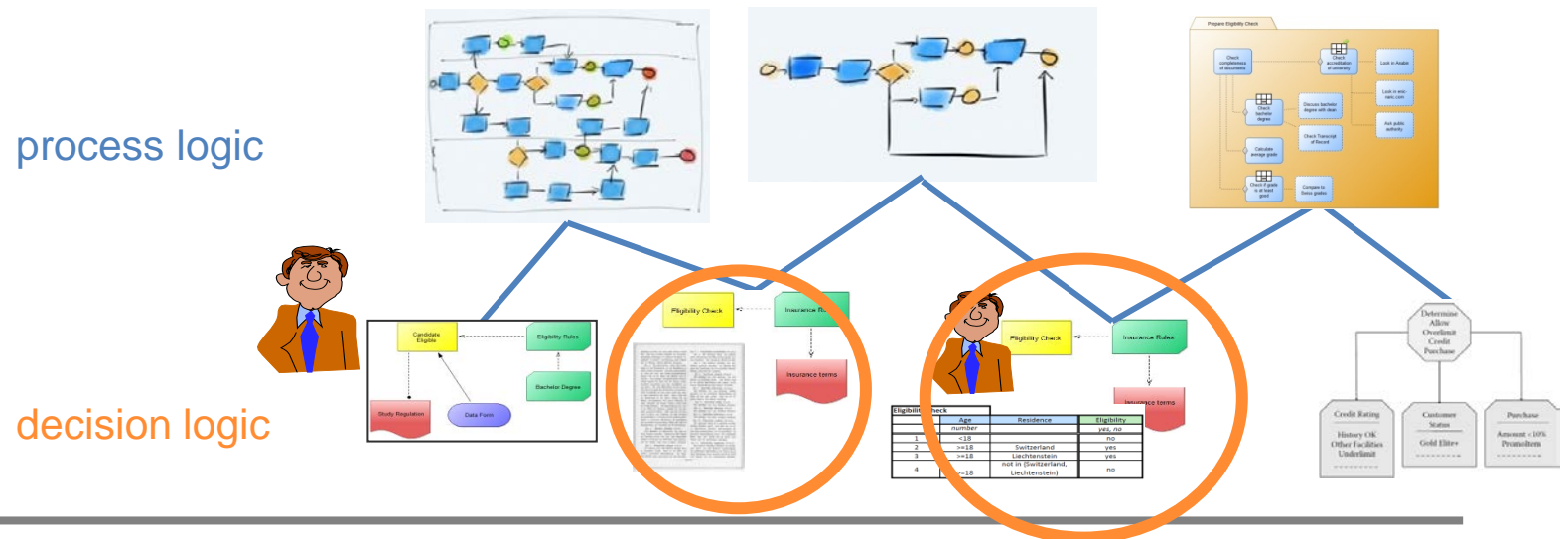
Business Process Management



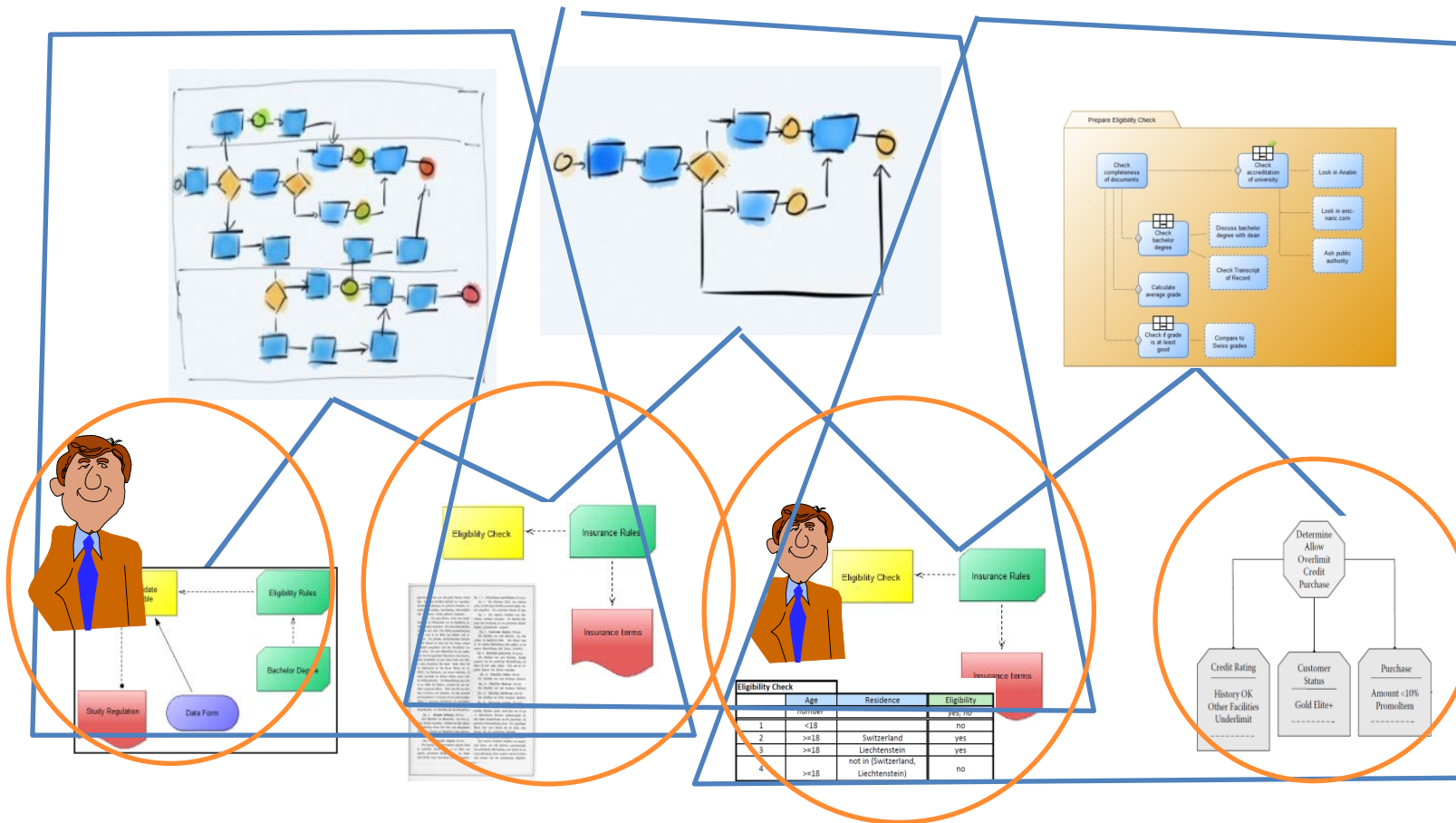
- BPM involves both the management of
 - ◆ process logic
 - ◆ business logic
- The management of decision logic is called Business Decision Management
- The decision logic can occur in different forms
 - ◆ implicit in head of people
 - ◆ as text (e.g. guidelines)
 - ◆ as rules
 - ◆ as formal decision model

Maturity of Business Processes and Decisions

- Quality of business processes involves both process logic and business logic
- Maturity of Business Processes has a view on single processes
- Maturity of Business Decision has a view on decision
 - ◆ Ensures quality of decision logic across process boundaries
 - ◆ In particular consistency of decisions shared by different processes



Maturity of Business Processes and Decisions



CMMI
process logic

BDMM
decision logic



The Business Decision Maturity Model BDMM

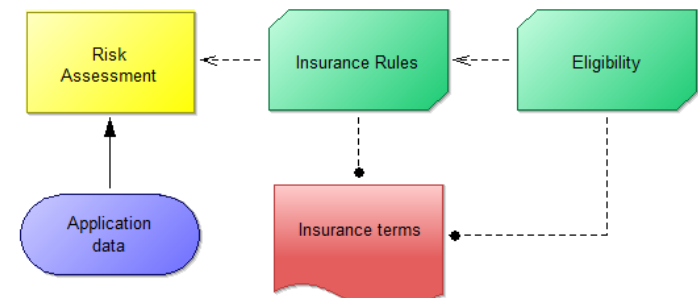
- The BDMM measures the *quality of the Business Decision Management Process*
 - ◆ deliver high-quality business logic behind business decisions
- Improving the quality of business decisions improves the performance of the business itself
- Thus, improving business decision management also improves the quality of business processes

Why Does Business Decision Management need a Maturity Model

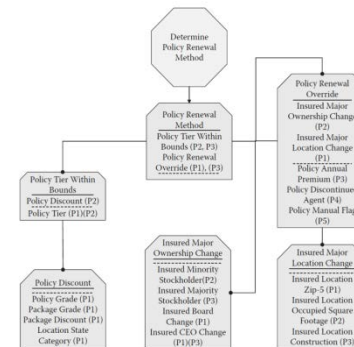
- Decision models can be (re-)used in several processes and applications
 - ◆ There may be changing requirements
 - ◆ Requirements may be conflicting
- Maturity Model for Decision Management
 - ◆ defining and managing important business decisions and changing the underlying business logic
 - ◆ create correct, understandable, and verifiable business logic supporting a business decision
 - ◆ independent of whether the decision is destined for program code or human execution

The right level for a maturity model

- Business value is found in an entire business decision
- Entire Decision Models emerge as the asset that
 - ◆ drives toward business objectives and that
 - ◆ drives enterprise and systems architecture in support of business objectives
- Thus, the maturity model should focus on business decisions not on individual business rules or decision tables



Eligibility Check			
	Age	Residence	Eligibility
	number		yes, no
1	<18		no
2	>=18	Switzerland	yes
3	>=18	Liechtenstein	yes
4	>=18	not in (Switzerland, Liechtenstein)	no



Overview of the BDMM

- Like typical maturity models, also the BDMM distinguishes 6 maturity levels

0 – Unmanagement

1 – Visible

2 – Agile

3 – Aligned

4 – Predictive

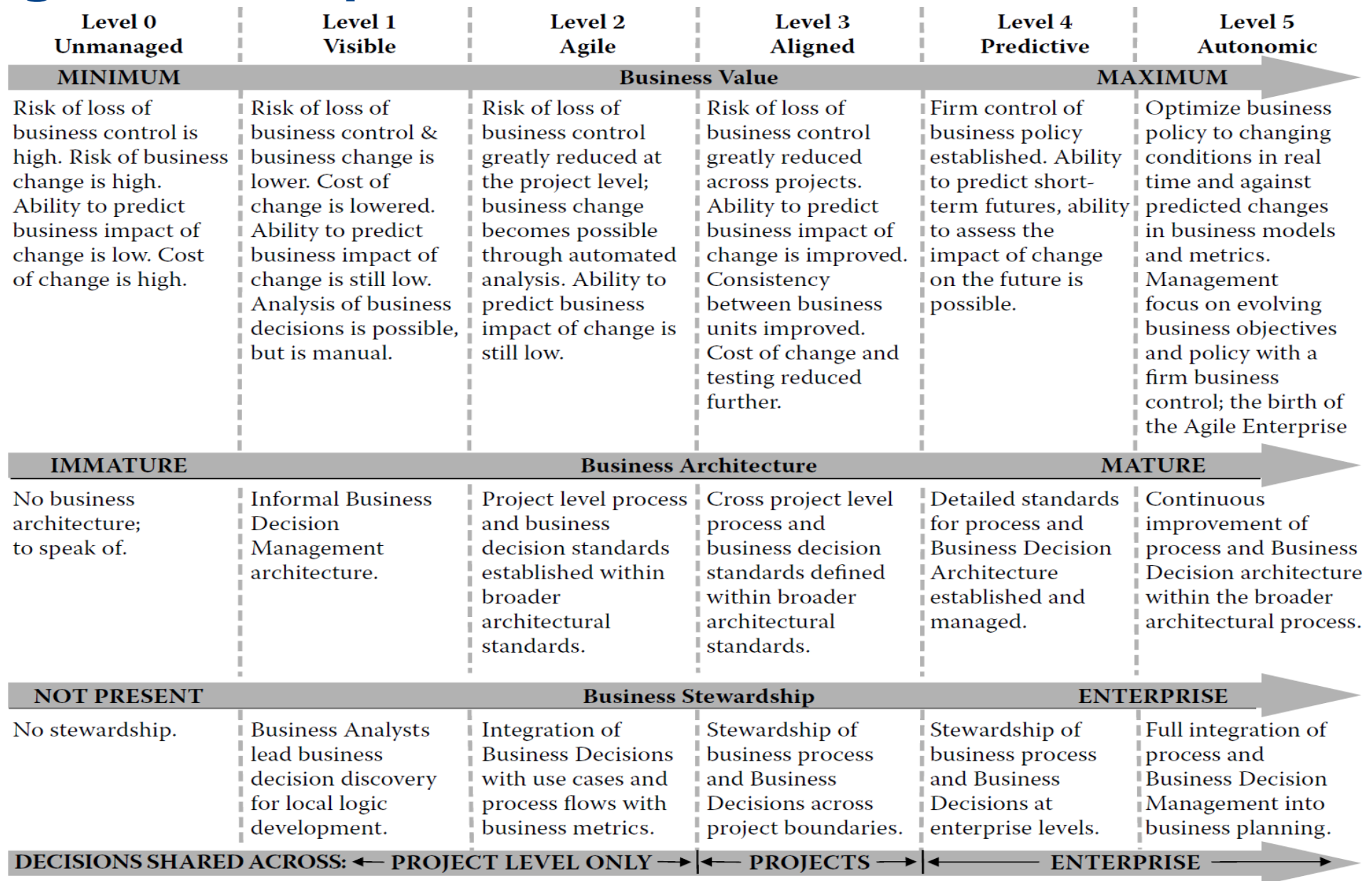
5 – Autonomic

The titles for the levels refer to the qualities anticipated in the Decision Models created at each level, not the quality of the process

- For each level there are three vectors
 - ◆ Business Value
 - ◆ Business Architecture
 - ◆ Business Governance/Stewardship

	0	1	2	3	4	5
Business Value						
Business Architecture						
Business Governance						

High-level Depiction of the BDMM



The Purpose of the Three Vectors

The three vectors have different roles

- Business Values
 - ◆ **Identify the relevant business consequence** of a particular level of maturity
 - ◆ **Determine the optimum maturity level** for an organisation
- Business Architecture and Business Governance
 - ◆ **Assess the BDMM levels**
 - ◆ Define characteristics and measurement criteria for achieving the level selected based on business values



High-level Characteristics of Levels 1 - 5

The different levels differ in three aspects

- ◆ Scope: local – enterprise
- ◆ Model: externalization – formalization – reuse
- ◆ Management: documentation – adjustments – prediction – automation

Level 1 – Visible	Adhoc, localized modeling standards; no business planning in relation to the business decision, local (project, process)
Level 2 – Agile	Formal decision model, rapid adjustments/changes, local (project, process, organisational unit)
Level 3 – Aligned	Reuse of decision models, decision modeling integrated in business planning process, reporting to business unit/enterprise
Level 4 – Predictive	Decision/process modeling process is part of culture, Constant monitoring and adjustment of decision logic, wide business scope
Level 5 – Autonomic	Continuous improvement, fast automatic response to changes, wide business scope

Characteristics of the Measured Vectors of the BDMM

Business Architecture	
1	Senior Management Involvement
2	Operating Unit Participation
3	Architecture Communication
4	Decision Modeling standards and process
5	Process Modeling standards
6	Business Planning standards
7	Integration with specialized execution environments
8	Integration to Business Intelligence
9	Integration into methodology
Business Governance	
1	Senior Management Involvement in Business Decisions
2	Operating Unit Participation in Business Decisions
3	Business Planning/Decision Governance
4	Performance Stewardship

Assessing the BDMM Level – Level 0: None

- General:
 - ◆ No awareness of business decisions as a manageable asset
 - ◆ Business logic is not formally managed or separated from code, documents, or individual knowledge
- Business Value
 - ◆ No business value in the Business Decision Management process
 - ◆ Lack of knowledge of business decisions presents risk to business and increases cost of change
- Business Architecture
 - ◆ No architecture and no formal control or management process relating to business logic or business decisions
- Business Governance
 - ◆ No business governance or accountability for business logic

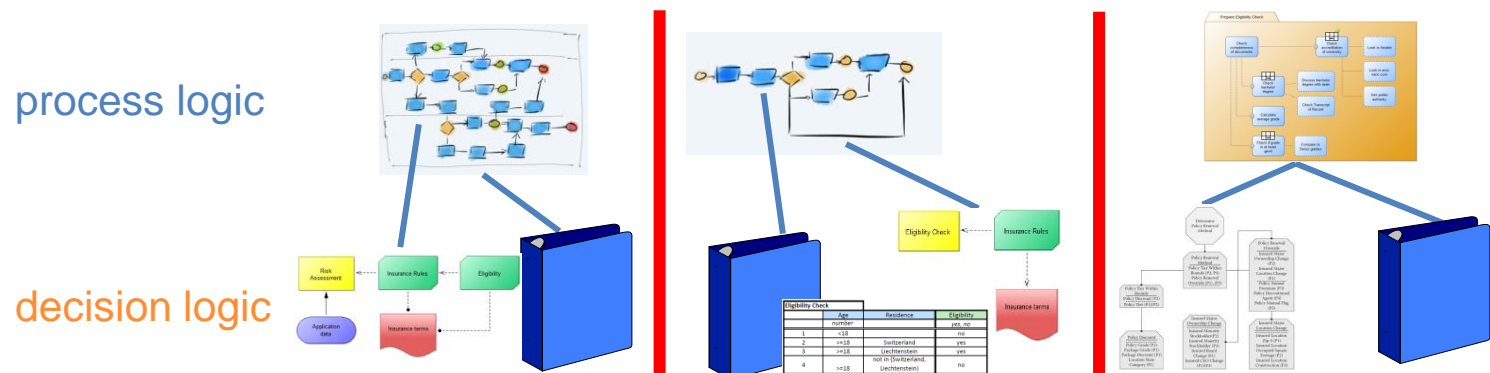
Assessing the BDMM Level – Level 1: Visible

■ General

- ◆ Gain visibility of business decisions and their business logic; allow stakeholders to know the business logic behind decisions.
- ◆ Visibility localized to *specific areas* of the organization or to a *project*.

■ Business Value:

- ◆ Business decision and their business logic are discovered, documented and modeled



Business Architecture at Level 1: Visible

- No formal architecture and no formal control or management process to integrate business decisions into the organization's architecture

<i>Business Architecture</i>	
1	Senior Management Involvement (in architecture): Limited management team awareness or involvement in the architecture process.
2	Operating Unit Participation (in architecture): Limited operating unit acceptance of the IT architecture process.
3	Architecture Communication: The latest version of the operating unit's IT architecture documentation is on the Web. Little communication exists about the IT architecture process and possible process improvements.
4	Decision Modeling standards and process: Ad hoc, localized Decision Modeling standards and process: loosely connected to process modeling standards.
5	Process Modeling standards: Ad hoc, localized decision modeling standards and process: loosely connected to decision modeling standards.
6	Business Planning standards: Ad hoc, localized business planning. Loosely integrated into Decision Model metrics.
7	Integration to specialized execution environments: No integration efforts; spreadsheets or simple repositories used for capture and storage.
8	Integration to Metrics/BI: Ad hoc reporting from data warehouse to support business decision modeling efforts.
9	Integration into methodology: Little or no integration into methodology.

Business Governance at Level 1: Visible

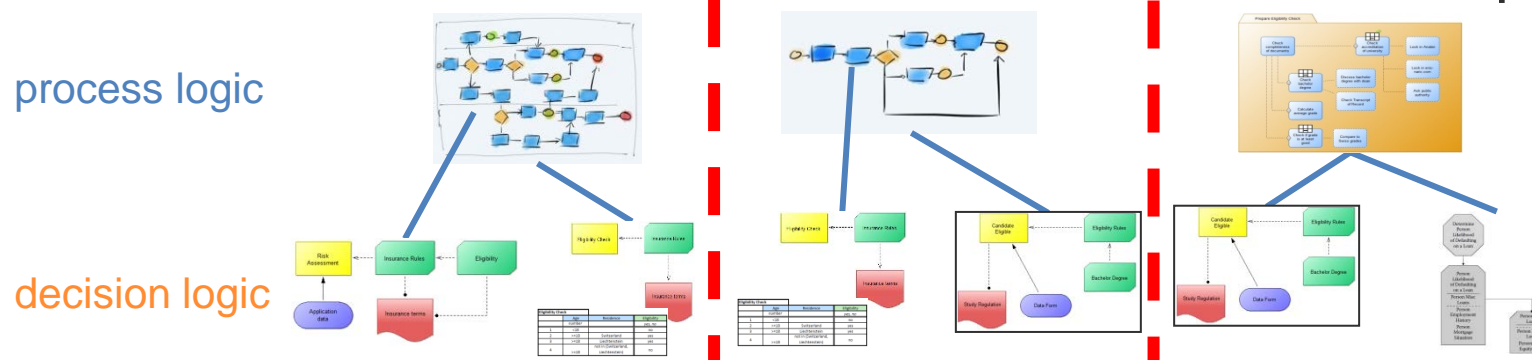
- Little or no business management awareness or formal interest in the business decision discovery process.
- Business analysts lead business decision discovery, business experts act as stewards.

<i>Business Governance</i>	
1	Senior Management Involvement in Business Decisions: Little to no management involvement.
2	Operating Unit Participation in Business Decisions: Only localized involvement in the business decision, with no operating unit involvement.
3	Business Planning/Decision Governance: Little or no business planning in relation to the business decision; any business policy is locally determined by subject matter experts (SMEs).
4	Performance Stewardship: The business analysts may undertake ad hoc, local testing of business decisions and business performance after discovery and implementation into process or code.

Assessing the BDMM Levels

Level 2: Agile

- General:
 - ◆ Achieve agility: business decisions are not just known, but *can be changed rapidly*.
 - ◆ Business decisions are implemented in technology such that the business analyst, or even business user, is able to rapidly change it
- Business Value:
 - ◆ Rapid adjustments to business policy; alignment between business policy, objective, and business decisions
 - ◆ Reduced risk of loss of business control at the project level



Business Architecture at Level 2: Agile

- Architectural maturity demonstrates a consistent ability to create, manage, and maintain business decisions
- Architectural process available to all project stakeholders

<i>Business Architecture</i>	
1	Senior Management Involvement (in architecture): Management is aware of activities surrounding the separation of business decisions.
2	Operating Unit Participation (in architecture): The operating unit is aware of the Business Decision Management approach.
3	Architecture Communication: The project publishes its architectural process and architectural deliverables in Web pages available to the operating unit.
4	Decision Modeling standards and process: A formal Decision Model standard and process is adopted by the project.
5	Process Modeling standards: A formal process modeling standard is adopted by the project.
6	Business Planning standards: A formal business planning standard is adopted by the project.
7	Integration with specialized execution environments: The architecture for the execution environment is harmonized to the Decision Modeling standard, and meets the objective of agility; that is, the logic in the Decision Models may be aligned to future changes to decision logic to meet the criteria of change velocity set by the project. A Business Decision repository is established with a formal glossary and traceability from business motivation and business policy all the way through to deployment.
8	Integration to BI: A formal process of feedback from BI reports, with performance adjustment to the business decisions, is defined and implemented.
9	Integration into methodology: A formal set of methods relating to Decision Modeling and implementation are defined and integrated into the project methodology.

Business Governance at Level 2: Agile

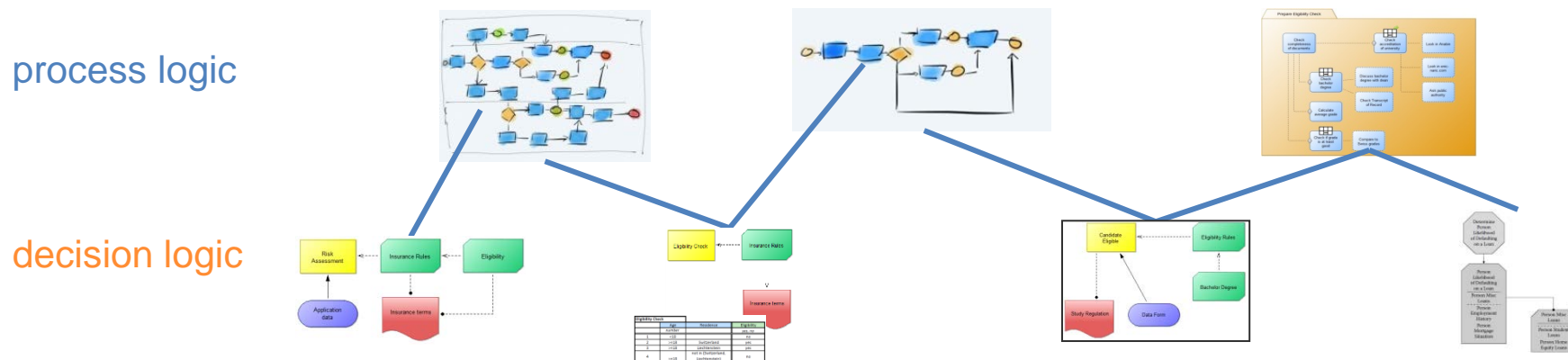
- Business decisions are based on business objectives and their associated metrics
- Business decisions are continually monitored and adjusted

<i>Business Governance</i>	
1	Senior Management Involvement in Business Decisions: Senior management is aware of the activities, and receives performance reports from performance stewards.
2	Operating Unit Participation in Business Decisions: The operating unit includes the project business planning and performance deliverables from project, and incorporates them into its business planning processes.
3	Business Planning/Decision Governance: Business analysts, working with performance stewards, lead the formal process of business planning and Decision Modeling.
4	Performance Stewardship: Performance stewards define performance definitions and performance reporting requirements from BI, and provide a formal process for Decision Model adjustment to performance. Performance stewards provide reporting to the project and organization.

Assessing the BDMM Levels

Level 3: Aligned

- General
 - ◆ transparency and *reuse of business decisions* to other stakeholders *across projects and organisational boundaries*
 - ◆ governance processes cross organizational boundaries
- Business Value
 - ◆ business decisions become aligned across the processes
 - ◆ risk of loss of business control is greatly reduced, and the ability to *predict business impact of change* is improved



Business Architecture at Level 3: Aligned

- Maturity of business architecture is implemented across projects, or even across several business units
- Clarity and widespread availability of the architectural processes
- Business planning linked to consistent business intelligence practices at the business unit level.
- Business decisions are developed and managed in a well managed process

<i>Business Architecture</i>	
1	Senior Management Involvement (in architecture): Senior management team aware of and supportive of the enterprisewide architecture process. Management actively supports architectural standards in Business Decision Management.
2	Operating Unit Participation (in architecture): The entire operating unit accepts and actively participates in the Business Decision Architecture process.
3	Architecture Communication: Architecture documents updated regularly on business unit architecture Web page.
4	Decision Modeling standards and process: Decision Modeling standards set and agreed across the business unit.
5	Process Modeling standards: Process modeling standards set and agreed across the business unit.
6	Business Planning standards: Business planning standards set and agreed across the business unit.
7	Integration with specialized execution environments: The architecture for the execution environment is harmonized to the Decision Modeling standard and is agreed across the business unit. The repository is provided with federation capabilities to establish local business decisions and business unit business decisions.
8	Integration with BI: A formal process of feedback from BI reports, with performance adjustment to the business decisions, is defined and implemented across the business unit.
9	Integration into methodology: A formal set of methods relating to Decision Modeling and implementation is defined and integrated into the project methodology across the business unit.

Business Governance at Level 3: Aligned

- resolve conflicts that may occur when business decisions are defined by stakeholders across organizational boundaries
- demonstrate consistency with business objectives; respond to changing business conditions and metrics
- close involvement of senior management
- performance stewards are responsible for tracking the business performance of the business decisions

<i>Business Governance</i>	
1	Senior Management Involvement in Business Decisions: Senior management is aware of the activities and receives performance reports from performance stewards. Senior management actively supports standards. Senior management adopts the Decision Model in their decision-making activities.
2	Operating Unit Participation in Business Decisions: Most elements of operating unit or enterprise show acceptance of or are actively participating in the Business Decision Management process.
4	Business Planning/Decision Governance: The business unit or enterprise creates a council-based governance system for business decisions and adopts a formal business planning process that integrates the Decision Model.
5	Performance Stewardship: Business unit or enterprise processes are implemented whereby performance stewards define performance definitions and performance reporting requirements from BI, and provide a formal process for Decision Model adjustment to performance. Performance stewards provide reporting to the business unit or enterprise.

Assessing the BDMM Levels

Level 4: Predictive

- General
 - ◆ being able to *predict changes*, develop business decisions in *response to anticipated or hypothesized business events* and conditions
- Business Value:
 - ◆ reduce future risk by anticipating future conditions and preparing for them
 - ◆ ability to model future events and carry out scenario planning using Decision Model and Business Intelligence tools to fashion the best possible business logic to use to respond to prospective changes.
 - ◆ adjust business decisions against changing conditions across a wide business scope across one or more businesses

Business Architecture at Level 4: Predictive

<i>Business Architecture</i>	
1	Senior Management Involvement (in architecture): Senior management team directly involved in the Business Decision architecture review process.
2	Operating Unit Participation (in architecture): The entire operating unit or enterprise accepts and actively participates in the Business Decision architecture process.
3	Architecture Communication: Architecture documents are updated regularly, and frequently reviewed for latest architecture developments/standards.
4	Decision Modeling standards and process: Decision Modeling process is part of the culture.
5	Process Modeling standards: Process Modeling process is part of the culture.
6	Business Planning standards: Business Planning process is part of the culture.
7	Integration specialized execution environments: Decision Model structures become a standard part of the execution environment. A sophisticated tracking of business metrics against business decisions is established, with dashboards and warnings to management.
8	Integration to BI: The BI and decision environments are integrated into a single prediction/action/reaction environment. The environment is able to model business scenarios and evaluate the likely results of the application of certain business decisions.
9	Integration into methodology: The close relationship between business motivation, business metrics, business process, and business decisions is embedded into the methodology as a standard approach to all IT and planning activities.

- Ability to model future events to
- Carry out scenario planning using the Decision Models and Business Intelligence tools



Business Governance at Level 4: Predictive

- Processes conduct and maintain business scenarios for future events.
- Expanded role of the performance stewards:
 - ◆ lead the effort to conduct simulations
 - ◆ elicit the correct business logic changes for a given scenario.
- Senior management is expected to become an integral part

<i>Business Governance</i>	
1	Senior Management Involvement in Business Decisions: Senior management use business decisions as an integral part of their approach to management, and drive the “what-if” scenarios.
2	Operating Unit Participation in Business Decisions: The Decision Model is part of the culture of the operating unit and is an important lever in the operation of the business.
3	Metrics/BI integration into Business Decisions: The BI integration into business decisions is seamless, and there is constant monitoring and adjustment of decision logic against actual and predicted results.
4	Business Planning/Decision Governance: The Decision Model governance is integral to the management structure of the business unit.
5	Performance Stewardship: The performance stewardship of the Decision Models and Process models is integral to the management structure of the business unit; they lead efforts to predict future events, elicit the appropriate Decision Model changes for those potential events, and test the changes in the scenario models.

Assessing the BDMM Levels

Level 5: Autonomic

■ General

- ◆ fast response to changing events *without human intervention*
- ◆ response is both based on careful *advance planning and instant adjustment*
- ◆ based on algorithms and predictive models that control the business decision logic

■ Business Value

- ◆ reduce business risk and optimize business opportunity by being capable of carefully planned, rapid, and continually improving reaction to events
- ◆ there is a culture of decision management across the business unit and decision management is constantly improving

Business Architecture at Level 5: Autonomic

- Automated algorithms and formulas to control business decisions against changing business results without external intervention.
- Automation of business models and scenarios created and tested in level 4

<i>Business Architecture</i>	
1	Senior Management Involvement (in architecture): Senior management involvement in optimizing process improvements in architecture development and governance.
2	Operating Unit Participation (in architecture): Feedback on architecture process from all operating unit or enterprise elements is used to drive architecture process improvements.
3	Architecture Communication: Architecture documents are used by every decision maker in the organization for every business decision.
4	Decision Modeling standards and process: Decision logic is architected to respond to business metrics; Continuous improvement in Decision Modeling standards and processes.
5	Process Modeling standards: Continuous improvement in Process Modeling standards and processes.
6	Business Planning standards: Business planning provides predictive models to determine business logic changes that will have to be made in the event of changes in business metrics. Continuous improvement in Business Planning standards and processes.
7	Integration with specialized execution environments: There is an automatic feedback loop between the BI and Decision Model environments based on predictive models created in the business planning process. The specialized execution environment is continuously improved.
8	Integration with BI: BI provides the metrics to drive the autonomic capability and is continuously improved to support this effort.
9	Integration into methodology: The methodology is continuously improved to support the autonomic system.



Business Governance at Level 5: Autonomic

- Constantly verify the continuing accuracy, relevance, and optimization of the autonomic business decisions
- Close cooperation of senior management, performance stewards, and the governance council

<i>Business Governance</i>	
1	Senior Management Involvement in Business Decisions: Senior management is involved in building and optimizing the predictive models.
2	Operating Unit Participation in Business Decisions: All operating unit elements provide feedback on the decision logic optimization and potential future events.
3	Metrics/BI integration into Business Decisions: The BI and business decision environments are considered an integrated system.
4	Business Planning/Decision Governance: The Decision Model governance is integral to the predictive modeling and constant optimization of the decision logic.
5	Performance Stewardship: Performance stewardship is integrated into Business Planning/Decision Stewardship.