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# Requirements Engineering

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2018 / 2019  
Course 8



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# Course 8 outline

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- ❖ Business Motivation Model



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## Course 8 Bibliography

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- ❖ Business Motivation Model (BMM), OMG, 2008.  
<http://www.omg.org/spec/BMM/1.1/PDF>
- ❖ Jim Amsden, *Capturing requirements with Business Motivation Model*, IBM Rational RequisitePro, and IBM Rational Software Modeler, IBM developerWorks



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# Business Motivation Model

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- ❖ The OMG Business Motivation Model is a simple metamodel for capturing business requirements.
- ❖ It focuses on capturing semantically rich requirements that are useful for business analysis, querying, impact analysis, change management, and business reasoning.
- ❖ BMM is a practiced approach to capturing business requirements that was finalized as an OMG standard in October 2007.
- ❖ BMM is one of several OMG standards developed by the Business Modeling and Integration Task Force (BMI-TF):
  - ❖ Business Motivation Model (BMM)
  - ❖ Semantics of Business Vocabulary and Rules (SBVR)
  - ❖ Organizational Structure Metamodel (OSM)
  - ❖ Business Process Definition Metamodel (BPDMM)
  - ❖ Business Process Modeling Notation (BPMN)
  - ❖ Business Process Maturity Metamodel (BPMM)



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# Business Motivation Model

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- ❖ BMM captures business requirements across different dimensions to rigorously capture and justify **why** the business wants to do something, **what** it is aiming to achieve, **how** it plans to get there, and how it assesses the result:
  - ❖ **Ends:** What the business wants to accomplish, not how
  - ❖ **Means:** How the business intends to accomplish its stated ends
  - ❖ **Directives:** The rules and policies that constrain and/or govern the available means
  - ❖ **Assessment:** Who and how the means are assessed against the ends, and the resulting potential impact
  - ❖ **Influencers:** Who or what judges or otherwise influences the assessment



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# What is BMM?

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- ❖ It contains:
  - ❖ A set of built-in concepts that define the elements of business plans. They are associated in a structure that is methodology-neutral; it will support a range of approaches for creating and maintaining a BMM for an enterprise, and is particularly strong in support of processes that are driven by business change.
  - ❖ Roles in the structure for three essential concepts: Business Process, Business Rule, and Organization Unit. They participate in associations within the BMM, but also in other associations outside its scope. They are regarded as references to elements that will be defined and maintained outside an enterprise's Business Motivation Model.
- ❖ It is simple.
- ❖ Its concepts have only basic attributes - identifier and text description.
- ❖ Most of its associations are unconstrained: optional and many-to-many.



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# What is BMM?

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- ❖ The Business Motivation Model is not a full business model.
- ❖ The elements of business plans do not prescribe in detail any of the following, each of which is an essential part of a full business model:
  - ❖ Business Processes
  - ❖ Workflows
  - ❖ Business Vocabulary



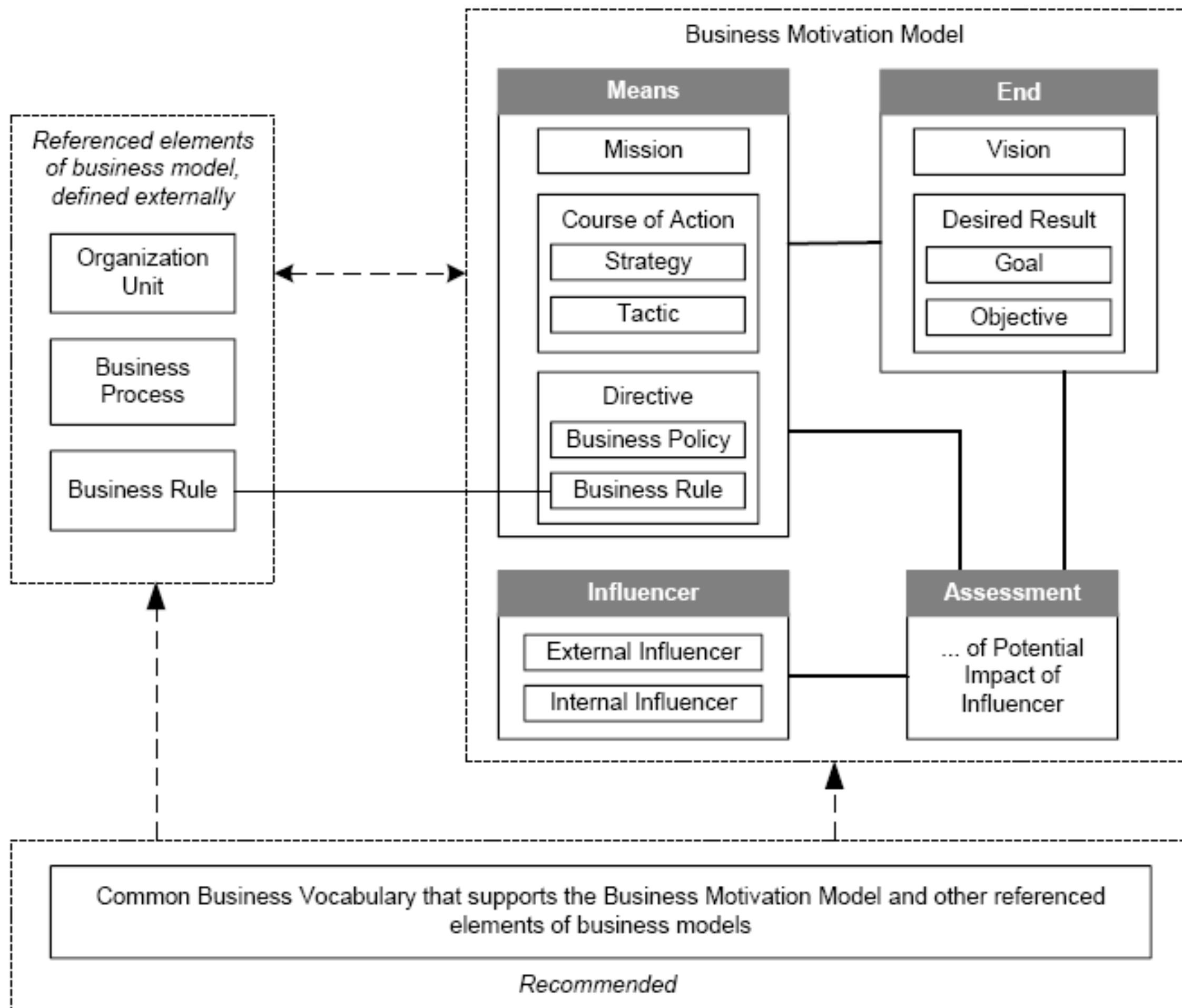
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# Methodologies and the BMM

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- ❖ BMM is not a methodology.
- ❖ It is neutral with respect to methodology or particular approach.
- ❖ Several exceptions:
  - ❖ The requirements development process should be business-driven.
  - ❖ Organized business plans should be a fundamental deliverable in any such process.
  - ❖ Business Rules and Business Processes are key elements of such business plans.
- ❖ Business Motivation Model is as a blueprint purposely designed to support a range of methodological approaches.







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# Business Rules in the BMM

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- ❖ Business Rules play an important role in development of business plans.
- ❖ Purposes:
  - ❖ Make business tactics sufficiently well developed to guide the actual performance of work.
  - ❖ Provide fallback positions when some element of the business plan fails.
  - ❖ Resolve conflicts when the Ends the business seeks are in conflict with one another.
- ❖ Developing the motivation for Business Rules from the business perspective is fundamentally important.



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# Beneficiaries of the BMM

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- ❖ Three types of people are expected to benefit from the BMM:
  - ❖ Developers of Business Plans
  - ❖ Business Modelers
  - ❖ Implementers of software tools and repositories
- ❖ It provides developers of business plans with:
  - ❖ A set of concepts that acts as a check-list of factors to be considered
  - ❖ A standard vocabulary
  - ❖ A flexible model to support their development processes
- ❖ Support business modelers:
  - ❖ The content of their enterprise's BMM will help to guide and shape their more detailed models.
  - ❖ Tools based on the BMM could provide a straightforward way of relating business processes, business rules, and organization units to each other, and to the desired results, courses of action and business policies that affect them.



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# Beneficiaries of the BMM

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- ❖ For Implementers of software tools and repositories:
  - ❖ The BMM provides the basis of a logical data design that has been implemented in the databases of tools that support the model.
  - ❖ They may chose to use the BMM in specifications of tools that support models with broader scope than the BMM.
  - ❖ They may chose to elaborate on the BMM, with additional attributes, more-normalized entities, and more refined associations.



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# Key Ideas in the BMM

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- ❖ Business Perspective:
  - ❖ All elements of an enterprise BMM are developed from a business perspective.
  - ❖ The idea is to develop a business model for the elements of the business plans before beginning system design or technical development, or even detailed business modeling.
- ❖ Motivation:
  - ❖ Enterprises do not, or should not, act randomly.
  - ❖ When an enterprise executes a business process or applies a business rule, it should be able to say why.



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# Key Ideas in the BMM

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- ❖ Reaction to Change:
  - ❖ A fundamental assumption of the BMM is that what an enterprise does is driven not by change, but by how the enterprise decides to react to change.
  - ❖ The recognition of changes caused by influencers (or, sometimes, no change when change was anticipated) and the assessment of their impact on the enterprise is crucial.
  - ❖ BMM does not require a specific process for reaction to change.
  - ❖ The model supports traceability:
    - ❖ Forward, from impact of influence to specification of business processes, business rules, and organization responsibilities.
    - ❖ Backward, for an enterprise to demonstrate why it does what it does the way it does it.



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# Key Ideas in the BMM

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- ❖ Separation of Concerns:
  - ❖ The concepts in the BMM are as simple as possible.
- ❖ Distinctions between:
  - ❖ Ends and means - what an enterprise wants to be, as opposed to what it has decided to do. Means can be changed without changing the ends; vice versa is, perhaps, not so common.
  - ❖ Changes caused by influencers and assessment of their impact. The impact of a given change may be assessed differently by different people in the enterprise.
  - ❖ Assessments, and the decisions based on them as expressed in business policies and ends.
  - ❖ Courses of action (decisions on how to exploit resources and capabilities) and business policies (directives that enable and constrain courses of action).
  - ❖ “How” and “How well.” Courses of action define how capabilities will be used; measures of how well they are used are defined within objectives they support. Objectives can be changed without changing courses of action.



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# Key Ideas in the BMM

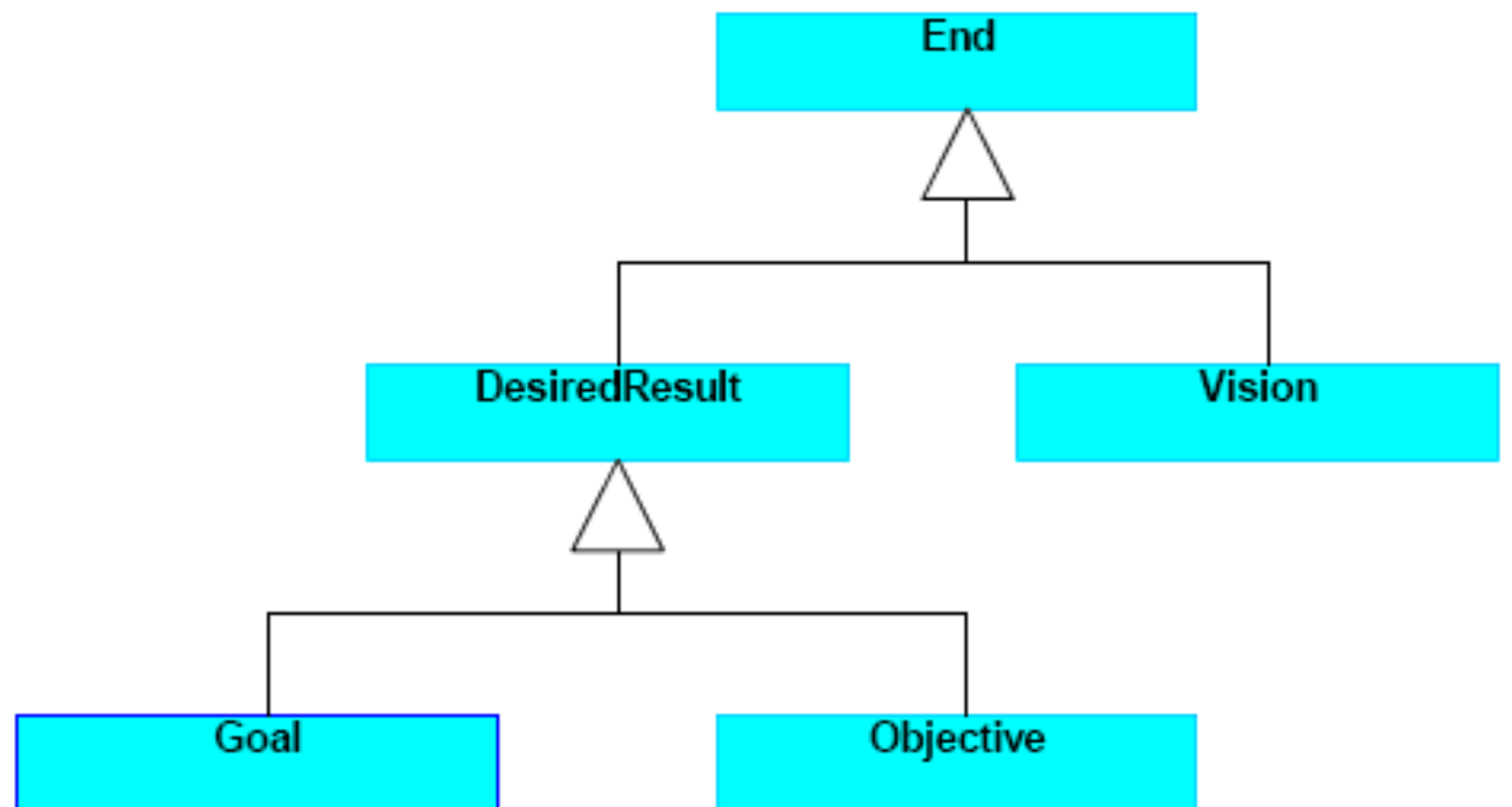
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- ❖ Decomposition:
  - ❖ The BMM is applicable to any enterprise large enough to need to define and manage business plans.
  - ❖ Three decomposition (includes / included in) associations:
    - ❖ Desired result
    - ❖ Course of action
    - ❖ Business policy
- ❖ Metrics:
  - ❖ Measures of performance are defined in an enterprise's BMM as objectives.
  - ❖ They may be based on risks and potential rewards identified in assessments.



# BMM Concepts

- ❖ End(s) Concept:
  - ❖ Ends are about what an enterprise wants to be.
  - ❖ It is something the business seeks to accomplish.
  - ❖ In describing Ends, it is useful to document who defined the End and at what point in time, so that an audit trail exists for future reference.
- ❖ Categories of End:





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# BMM Concepts -Ends

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## ❖ **Vision:**

- ❖ It is an overall image of what the organization wants to be or become.
- ❖ It usually encompasses the entire organization and is long-term in its perspective.
- ❖ It describes the future state of the enterprise, without regard to how it is to be achieved.

Enterprise	Vision
EU-Rent	Be the car rental brand of choice for business users in the countries in which we operate.
Pizza Company	Be the city's favorite pizza place.
Consulting Company	Be the premier consulting company in the industry.
Retail Pharmacy	Be the low-cost health care provider with the best customer service.
Municipal Police Department	Be a professional, trusted provider of police services; a leader in cooperative efforts with the neighborhood and other agencies to make our city safer.



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# BMM Concepts -Ends

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## ❖ **Desired Result:**

- ❖ Concepts: Goal and Objective
- ❖ A Goal tends to be longer term, qualitative (rather than quantitative), general (rather than specific), and ongoing.
- ❖ An Objective tends to be short term, quantitative (rather than qualitative), specific (rather than general), and not continuing beyond its time frame.
- ❖ Objectives differ from Goals in that Objectives should always be time-targeted and measurable. Goals, in contrast, are not specific in these ways.
- ❖ Desired Results are supported by Courses of Action, which can be either Strategies or Tactics. Generally, Goals are supported by Strategies, and Objectives are achieved by Tactics.



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# BMM Concepts -Ends

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## ❖ **Goal:**

- ❖ It is a statement about a state or condition of the enterprise to be brought about or sustained through appropriate Means.
- ❖ A Goal amplifies a Vision. It indicates what must be satisfied on a continuing basis to effectively attain the Vision.
- ❖ It should be narrow - focused enough that it can be quantified by Objectives.

Enterprise	Goal
EU-Rent	To be a 'premium brand' car rental company, positioned alongside companies such as Hertz and Avis.
EU-Rent	To provide industry-leading customer service.
EU-Rent	To provide well-maintained cars.
EU-Rent	To have vehicles available for rental when and where customers expect them.
Pizza Company	To deliver pizzas in an expedient amount of time.
Consulting Company	To improve customer satisfaction (over the next five years).
Publishing Company	To improve customer satisfaction (over the next five years).
e-Business Company	To have more customers than any other e-business.



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# BMM Concepts -Ends

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## ❖ **Objective:**

- ❖ It is a statement of an attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve its Goals.
- ❖ **Attainable** - It is self-evident that Objectives should be attainable. If they are not, the business plans are unrealistic and will likely fail.
- ❖ **Time-targeted** - All Objectives should be time-targeted.
  - ❖ An absolute time frame (e.g., “by January 1, 2013”) or relative time frame (e.g., “within two years”) should be included in each Objective. This time frame indicates when the Objective is to be met.
- ❖ **Measurable** - Objectives should be measurable.
  - ❖ They must include some explicit criteria for determining whether the Objective is being met in practice.
  - ❖ This criteria may be fairly exacting (for example, “on-time 95% of the time”).
  - ❖ At the very minimum, the criteria must provide a basis for making a “yes or no” determination (e.g., “up and running”).



# BMM Concepts -Ends

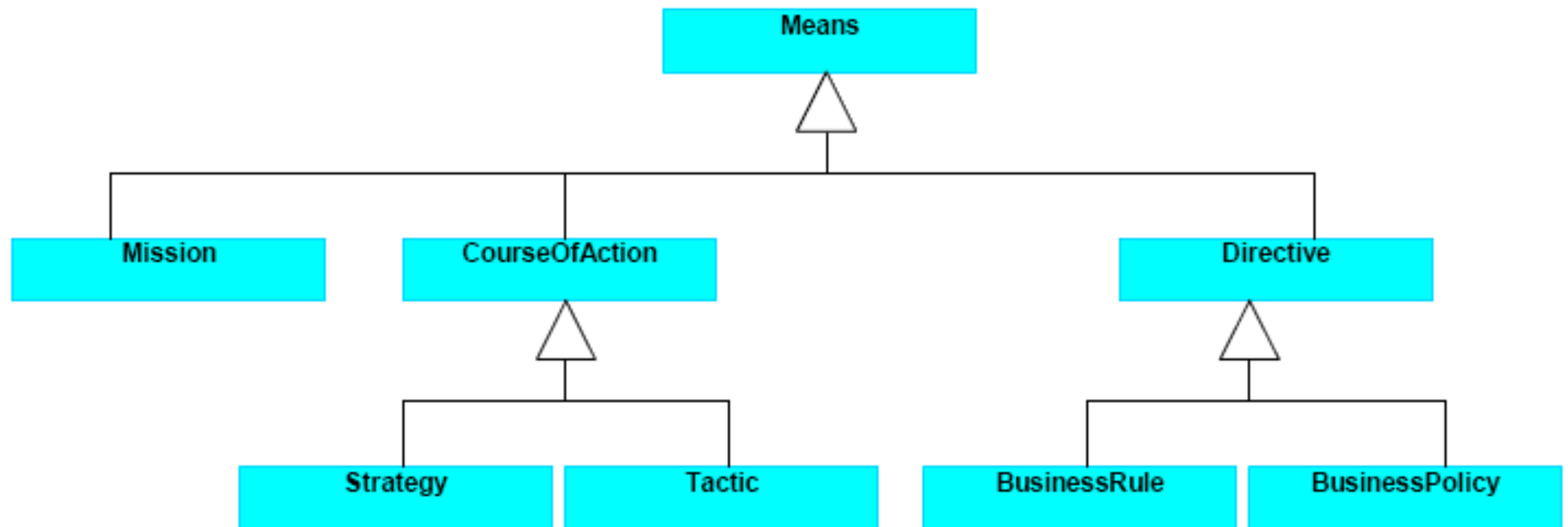
- ❖ **Objective:**
  - ❖ Statements of Objective should always begin with the time-targeted phrase, followed by a quantified noun.
  - ❖ Examples: By 09 / 01 / 2001, Effective immediately, After 2 years, Within 5 weeks
  - ❖ An Objective quantifies a Goal, i.e., it provides the basis for measures to determine whether the Goal is being achieved. The Goal is quantified by these measurable Objectives.

Enterprise	Objective
EU-Rent	By end of current year, be rated by A C Nielson in the top 6 car rental companies in each operating country within the European Community.
EU-Rent	By end of current year, be rated by A C Nielsen in the top 9 car rental companies in all other operating countries.
EU-Rent	By end of current year, to score 85% on EU-Rent's quarterly customer satisfaction survey.
EU-Rent	During 4th quarter of current year, no more than 1% of rentals need the car to be replaced because of mechanical breakdown (excluding accidents).
Pizza Company	By January 1, 2007, 95% on-time pizza delivery.
Consulting Company	By June 30, 2008, an operational customer call center.
e-Business Company	Within six months, 10% increase in product sales.



# The Means Concepts

- ❖ A Means represents any device, capability, regime, technique, restriction, agency, instrument, or method that may be called upon, activated, or enforced to achieve Ends.
- ❖ It does not indicate either the steps (business processes and workflow) necessary to exploit it, nor responsibility for such tasks, but rather only the capabilities that can be exploited to achieve the desired Ends.





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# BMM Concepts -Means

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## ❖ **Mission:**

- ❖ It indicates the ongoing operational activity of the enterprise.
- ❖ It describes what the business is or will be doing on a day-to-day basis.
- ❖ A Mission makes a Vision operative: it indicates the ongoing activity that makes the Vision a reality.
- ❖ A Mission statement should consist of the following three items only and should be formed using brief statements of them.
  1. An action part (eg. “provide”)
  2. A product or service part (eg. “pizzas”)
  3. A market or customer part (eg. “customers city-wide”)

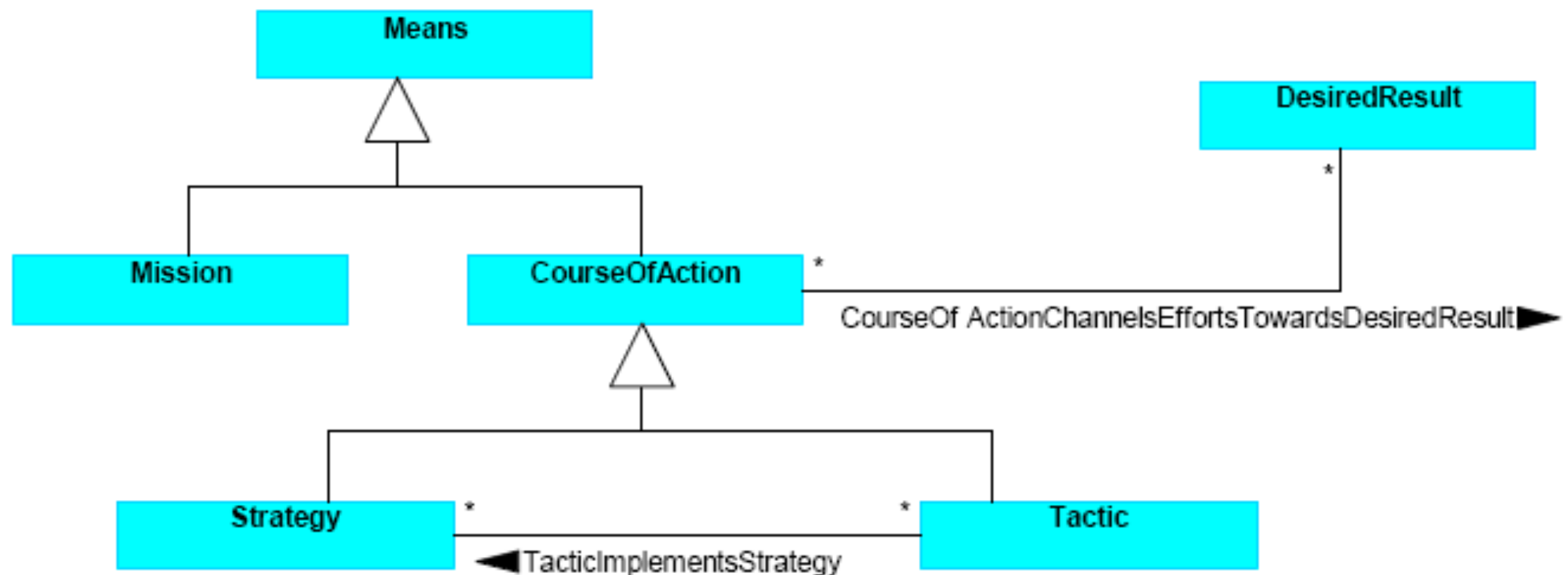
Enterprise	Objective
EU-Rent	Provide car rental service across Europe and North America for both business and personal customers.
Pizza Company	Provide pizza to customers city-wide.
Consulting Company	Provide consulting, outsourcing, and staff augmentation services to companies in North America.
Retail Pharmacy	Provide generic and ethical drugs to the retail market.



# BMM Concepts -Means

## ❖ **Course of Action:**

- ❖ It is an approach or plan for configuring some aspect of the enterprise involving things, processes, locations, people, timing, or motivation undertaken to achieve Desired Results (Goals, Objectives).
- ❖ Courses of Action (i.e., Strategies and Tactics), represent the basic elements of a general plan or overall solution.
- ❖ They are not Business Processes, but they can be realized by Business Processes.





# BMM Concepts -Means

## ❖ **Strategy:**

- ❖ A Strategy is one component of the plan for the Mission. It represents the essential Course of Action to achieve Ends (Goals in particular).
- ❖ It usually channels efforts towards those Goals.
- ❖ A Strategy is implemented by Tactics.

Enterprise	Strategy
EU-Rent	Operate nation-wide in each country of operation, focusing on major airports, competing head-to-head, on-airport, with other premium car rental companies.
EU-Rent	Manage car purchase and disposal at local area level, with national (operating company) guidance covering: <ul style="list-style-type: none"><li>• What models may be bought from which manufacturers;</li><li>• Overall numbers and mix of models;</li><li>• When to dispose of cars, by mileage and age;</li><li>• Phasing of purchasing and delivery.</li></ul>
EU-Rent	Join an established rewards scheme run by a third party (i.e., outsource rather than building own scheme).
Pizza Company	Deliver pizzas to the location of the customer's choice.
Consulting Company	Implement a Customer Relationship Management System.
Consulting Company	Increase repeat business
e-Business Company	Buy other e-business mailing lists



# BMM Concepts -Means

- ❖ **Tactic:**
  - ❖ It represents part of the detailing of Strategies. It implements Strategies.
    - ❖ Tactic “Call first-time customers personally” implements the Strategy “Increase repeat business.”
  - ❖ Tactics generally channel efforts towards Objectives.
    - ❖ Tactic “Ship products for free” channels efforts towards the Objective “Within six months, 10% increase in product sales.”

Enterprise	Tactic
EU-Rent	Encourage rental extensions
EU-Rent	Outsource maintenance for small branches
EU-Rent	Create standard specifications of car models, selecting from options offered by the manufacturers. Note: these will be trade-offs between ‘rentable’ and ‘high residual value for sales.’
EU-Rent	Equalize use of cars across rentals so that mileage is similar for cars of the same car group and age.
EU-Rent	Comply with car manufacturers’ maintenance schedules
Pizza Company	Hire drivers with their own vehicles to deliver pizzas
Consulting Company	Provide each member of the sales force with a palmtop
Consulting Company	Call first-time customers personally
e-Business Company	Ship products for free



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# BMM Concepts -Means

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## ❖ **Directive:**

- ❖ Directive defines or constrains or liberates some aspect of an enterprise.
- ❖ It is intended to assert business structure or to control or influence the behavior of the business, and is stated in declarative form.
- ❖ Directives indicate how the Courses of Action should, or should not, be carried out. They govern Courses of Action.
- ❖ It is expected that all Courses of Action should be governed by some Directive.
- ❖ Any Course of Action not governed by a Directive should be examined carefully to discover potential omissions.
- ❖ Two types: Business Rule and Business Policy.



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# BMM Concepts -Means

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- ❖ **Business Rule Enforcement Level:**
  - ❖ A Business Rule that guides behavior has an enforcement level. Enforcement levels represent alternatives in a graded or ordered scale, each of which indicates the severity of action imposed to put or keep a rule in force.

Value	Meaning
strictly enforced	If the rule is violated, the penalty is always applied.
deferred enforcement	Strictly enforced, but enforcement may be delayed (e.g., waiting for resource with required skills).
pre-authorized override	Enforced, but exceptions allowed, with prior approval for actors with before-the-fact override authorization.
post-justified override	If not approved after the fact, you may be subject to sanction or other consequences.
override with explanation	Comment must be provided when the violation occurs.
guideline	Suggested, but not enforced.



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# BMM Concepts -Means

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## ❖ **Business Rule Enforcement Level:**

### ❖ Examples:

Enterprise	Directive	Enforcement Level
EU-Rent	An EU-Rent agent who is found, after a managerial review, to have rented a vehicle to a customer without a valid driver's license, is to be fired.	strictly enforced
Pizza Company	A driver who is convicted of one moving traffic violation while driving for the company will be counseled by a manager concerning safe driving.	pre-authorized override
e-Business Company	A customer rated negative by more than ten other customers will be blocked forever from doing business.	override with explanation



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# BMM Concepts -Means

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## ❖ **Business Policy:**

- ❖ A Business Policy is a Directive that is not directly enforceable, and whose purpose is to govern or guide the enterprise.
- ❖ Business Policies provide the basis for Business Rules. Business Policies also govern Business Processes.
- ❖ In general Business Policies exist to govern, i.e., to control, guide, and shape the Strategies and Tactics.

Source	Business Policy
EU-Rent	Depreciation of rental cars must be minimized.
EU-Rent	Rental payments must be guaranteed in advance.
EU-Rent	Rental cars must not be exported.
EU-Rent	Rental contracts are made under the law of the country in which the pick-up branch is located.
EU-Rent	Rentals must comply with relevant laws and regulations of all countries to be visited.
Pizza Company	Safety in the kitchen, and in the streets, comes first.
e-Business Company	A business representative will personally contact each customer who makes a complaint.



# BMM Concepts -Means

## ❖ Business Rule:

- ❖ A Business Rule is a Directive, intended to govern, guide, or influence business behavior, in support of Business Policy.
- ❖ It is a single Directive that does not require additional interpretation to undertake Strategies or Tactics.
- ❖ A Business Rule is often derived from Business Policy. Business Rules guide Business Processes.

Source	Business Rule
EU-Rent	Each Car purchased must match the standard specification of its Car Model.
EU-Rent	The Car assigned to a Rental must be: at the time of assignment, of the available Cars in the requested Car Group, the one with the lowest mileage.
EU-Rent	A customer must present a valid driver's license in order to rent an EU-Rent vehicle.
EU-Rent	A Car whose odometer reading is greater than (next service mileage – 200) must be scheduled for service.
EU-Rent	The rental of a car whose odometer reading is greater than (next service mileage – 500) may be extended only if the car is exchanged at an EU-Rent branch.
EU-Rent	Every driver on a rental must be over 21 years old.
Pizza Company	Pizzas must be delivered within one hour.
Pizza Company	Pizzas may not be delivered beyond a radius of 30 miles.
e-Business Company	The order tax amount must be calculated at the time the order is placed.
e-Business Company	An order must not contain more than 25 order items.



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# BMM Concepts -Influencers

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- ❖ **Influencer:**
  - ❖ An Influencer can be anything that has the capability to 'produce an effect without apparent exertion of tangible force or direct exercise of command, and often without deliberate effort or intent.'
  - ❖ The Influencers of concern to business plans are those that can impact the enterprise in its employment of Means or achievement of its Ends.
  - ❖ Two built-in categories:
    - ❖ External: an influencer that is outside the enterprise's organizational boundaries.
    - ❖ Internal: an influencer from within the enterprise.
  - ❖ An enterprise can define whatever Influencer Categories it requires.



# BMM Concepts -Influencers

## ❖ **External Influencers:**

- ❖ Are those outside an enterprise's organizational boundaries that can impact its employment of Means or achievement of Ends.
- ❖ Categories:

Influencer Category	Description
Competitor	A rival enterprise in a struggle for advantage over the subject enterprise.
Customer	A role played by an individual or enterprise that has investigated, ordered, received, or paid for products or services from the subject enterprise.
Environment	The aggregate of surrounding conditions or Influencers affecting the existence or development of an enterprise.
Partner	An enterprise that shares risks and profit with the subject enterprise (or is associated with the subject enterprise to share risks and profit) because this is mutually beneficial.
Regulation	An order prescribed by an authority such as a government body or the management of an enterprise.
Supplier	A role played by an individual or enterprise that can furnish or provide products or services to the subject enterprise.
Technology	The role of technology, including its developments and limitations — there may be prerequisites for use of technology; there may be enterprise activity that technology enables or restricts.



# BMM Concepts -Influencers

## ❖ External Influencers:

Enterprise	External Influencer	Category
EU-Rent	Two smaller competitors have merged and the joint enterprise is now bigger than EU-Rent in several European countries.	Competitor
EU-Rent	'Premium brand' car rental companies such as Hertz and Avis have a 'high quality, value for money' image; and can charge higher rates.	Competitor
EU-Rent	Budget airlines offering low-cost, short-haul flights, often to secondary airports.	Competitor
EU-Rent	EU-Rent's primary target is business customers, but it recognizes the need to appeal also to personal renters.	Customer
EU-Rent	Car parking and storage in city centers is limited and expensive.	Environment
EU-Rent	Car manufacturers – car models and options offered, prices, contract terms, and conditions.	Supplier
EU-Rent	Insurers – cover offered, options, premiums.	Supplier
EU-Rent	Vehicle identification and tracking systems.	Technology
EU-Rent	Availability and cost of (environment-friendly) electric and LPG cars.	Technology
EU-Rent	Internet support for self service rental reservations.	Technology
Pizza Company	"Depreciation starts when you first use the property in your business or for the production of income. It ends when you take the property out of service, deduct all your depreciable cost or other basis, or no longer use	Regulation



# BMM Concepts -Influencers

- ❖ **Internal Influencers:**
  - ❖ Are those from within an enterprise that can impact its employment of Means or achievement of Ends.
  - ❖ The default set also includes two categories, Implied Influencer and Explicit Influencer.

Influencer Categories	Description
Assumption	Something that is taken for granted or without proof.
Corporate Value	An ideal, custom, or institution that an enterprise promotes or agrees with (either positive or negative).
- Explicit Value	A Corporate Value explicitly set forth and declared.
- Implicit Value	A Corporate Value not explicitly declared but nonetheless understood by some or all of the people in an enterprise.
Habit	A customary practice or use.
Infrastructure	The basic underlying framework or features of a system.
Issue	A point in question or a matter that is in dispute as between contending partners.
Management Prerogative	A right or privilege exercised by virtue of ownership or position in an enterprise.
Resource	The resources available for carrying out the business of an enterprise, especially their quality.



# BMM Concepts -Influencers

Enterprise	Internal Influencer	Category
EU-Rent	EU-Rent needs to expand its business year on year.	Assumption
EU-Rent	A loyalty rewards program is essential for attracting business customers.	Assumption
EU-Rent	Managers are generally promoted from within the company.	Habit
EU-Rent	Successful branch managers are usually allowed to remain at their branches for as long as they want to.	Habit
EU-Rent	Branch counter staff receive two days' introductory training. Further training is informal, on the job.	Habit
EU-Rent	Rental reservations can be made by telephone, via Internet, or in person. A rental branch can accept an in-person reservation for any other EU-Rent branch.	Infrastructure
EU-Rent	To what extent car maintenance and servicing should be outsourced.	Issue
EU-Rent	The EU-Rent board has decided to give priority to Eastern Europe for business expansion in the next three years.	Management Prerogative
EU-Rent	Cars – popular models from reputable manufacturers, low mileage, environment-friendly, low-cost maintenance.	Resource
EU-Rent	Branch staff: <ul style="list-style-type: none"> <li>• Counter clerks - high turnover, variable quality</li> <li>• Managers - low turnover, high quality</li> </ul>	Resource
EU-Rent	EU-Rent is environment-friendly. All the car models it offers for rental have good fuel economy and low emissions.	Explicit Corporate Value



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# BMM Concepts -Assessments

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## ❖ **Assessment:**

- ❖ An Assessment is a judgment of some Influencer that affects the organization's ability to employ its Means or achieve its Ends.
- ❖ It expresses a logical connection (i.e., fact type) between Influencers and the Ends and / or Means of the business plans.
- ❖ It indicates which Influencers are relevant to which Ends and / or Means.
- ❖ Different people or groups of people might make different Assessments of the very same Influencers on the very same Ends and Means, and perhaps even the same person or group of people at different points in time.
- ❖ It is very important to indicate which person or group of people makes which Assessment of an Influencer at which point in time, so that an audit trail exists for future reference.
- ❖ Categories:
  - ❖ Strength
  - ❖ Weakness
  - ❖ Opportunity
  - ❖ Threat



# BMM Concepts -Assessments

- ❖ **Strength:** Indicates some advantage or area of excellence within the enterprise that can impact its employment of Means or achievement of Ends.

Enterprise	Strength	Affects
EU-Rent	<b>Infrastructure:</b> geographical distribution of branches	Appeal to business customers.
EU-Rent	<b>Implicit corporate values:</b> environment-friendly, value rather than price – good positioning of EU-Rent, differentiating from competitors.	Promotion to all customers as a ‘premium brand.’
EU-Rent	<b>Resource:</b> rental branch managers – ground-level leaders of the customer-facing business.	Building branch networks around major cities and airports.

- ❖ **Weakness:** Indicates some area of inadequacy within the enterprise.

Enterprise	Weakness	Affects
EU-Rent	The software for internet rentals has few facilities for self-service of corporate rental agreements (e.g., analyzing car usage by employees, removing people who have left their employment with the corporate customer).	Appeal to businesses for corporate agreements.
EU-Rent	High turnover of branch counter staff frequently causes shortage of experienced staff in branches. This can cause delays in dealing with exceptions and problems.	Provision of high-quality customer service.



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# BMM Concepts -Assessments

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- ❖ **Opportunity:**
  - ❖ Indicates that some Influencer can have a favorable impact on the organization's employment of Means or achievement of Ends.

Enterprise	Opportunity	Affects
EU-Rent	EU-Rent thinks there is room for competition in the 'premium brand' car rental market.	Appeal to business users. Increase in rental rates.
EU-Rent	Depreciation on cars between their purchase, new, and their sale at the end of their rental life is a critical factor in financial success. Their employment with the corporate customer.	Improved management of depreciation would reduce costs.



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# BMM Concepts -Assessments

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## ❖ **Threat :**

- ❖ Indicates that some Influencer can have an unfavorable impact on the organization's employment of Means or achievement of Ends.

Enterprise	Threat	Affects
EU-Rent	Budget airlines provide low-cost flights to major cities, but using secondary airports where EU-Rent does not have branches.	Appeal to business users. Expansion into Eastern Europe.
EU-Rent	Budget airlines offer a cost effective and faster alternative to car rental for short distances (say, up to 200 miles).	Building 'premium' business from major airports.
EU-Rent	Congestion charges in European city centers: <ul style="list-style-type: none"><li>• Discourage customers from renting cars in city centers.</li><li>• Increase EU-Rent operational costs when moving cars to and from city offices.</li></ul>	Positioning city offices – moving them outside congestion zones will reduce convenience for business customers.



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# BMM Concepts -Assessments

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## ❖ **Potential Impact:**

- ❖ An Assessment records judgments about the impact (or potential for impact) of some Influencer on Ends and / or Means in terms of Potential Impacts.
- ❖ An Assessment identifies some Potential Impact(s) that is / are significant to that Assessment.
- ❖ Each Potential Impact is an evaluation that quantifies or qualifies some aspect of an Assessment in specific terms, types, or dimensions.
- ❖ Categories:
  - ❖ Risk
  - ❖ Potential Reward



# BMM Concepts -Assessments

## ❖ **Risk:**

- ❖ It is a category of Impact Value that indicates the impact and probability of loss.
- ❖ They may be expressed as formulae:
  - ❖ Probability of loss (e.g., 5% probability)
  - ❖ Potential loss (e.g., \$500,000 loss)
  - ❖ Unit-of-measure (e.g., loss in USD)

Enterprise	Assessment	Risk
EU-Rent	<b>Opportunity</b> - room for competition in the 'premium brand' car rental market.	Failure to position EU-Rent as a premium brand risks loss of an estimated 15% of current customers without replacement by new customers.
EU-Rent	<b>Opportunity</b> - targeting business customers and increasing rental rates.	Many unrented cars at weekends, with rates undercut by the 'cheap and cheerful' competition.
EU-Rent	<b>Threat</b> - stringent emission control requirements in Scandinavia have to be met by any EU-Rent car that might be driven in Scandinavia.	Severe financial penalties for failure to comply.



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# BMM Concepts -Assessments

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## ❖ **Potential Reward:**

- ❖ It is a category of Potential Impact that indicates the probability of gain.
- ❖ They may be expressed as formulae:
  - ❖ Probability of gain (e.g., 30% probability)
  - ❖ Potential gain (e.g., \$40,000 gain)

Enterprise	Assessment	Potential Reward
EU-Rent	Opportunity - room for competition in the 'premium brand' car rental market.	Market acceptance would support an average increase of 12% on rental rates. In moving up-market, EU-Rent expects to replace at least 15% of its current customers.
EU-Rent	Opportunity - improved management of depreciation of cars.	Reduction of depreciation costs by 3%.



# BMM Example

## ❖ Scenario:

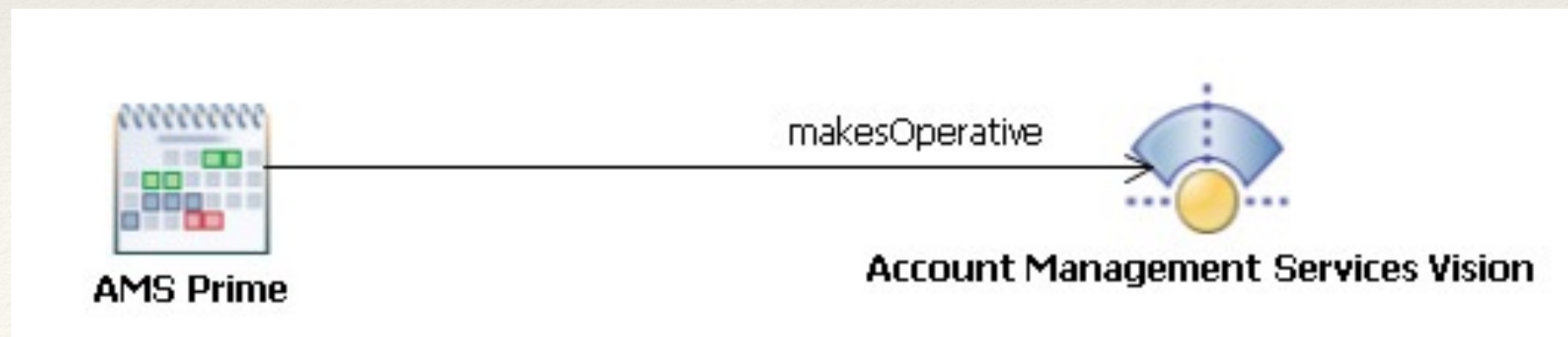
JK Enterprises is a (fictitious) global financial organization that is involved in a business optimization program to improve how they handle opening customer accounts. JK Enterprise's Business Process Optimization (BPO) effort, called Project Enterprise, identified opening an account as one of the key business processes that needs improvement and automation. Account opening consists of account sales, application, verification, and activation.

## ❖ Goals:

JK Enterprises wants to address its account management process to improve efficiency, reduce costs and latency, and increase customer satisfaction.

❖ The project manager initiated the AMS Prime project to improve and automate parts of the account opening process.

❖ The business analyst's job is to capture and analyze the requirements for this project and to provide initial business use cases that describe what the new account management process must do.





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# BMM Example - Ends

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After reviewing the project's vision, the business analyst amplifies the vision with more specific business goals and then quantifies each goal with specific, measurable, achievable, realistic, and time-bound (SMART) objectives.

Goals identified:

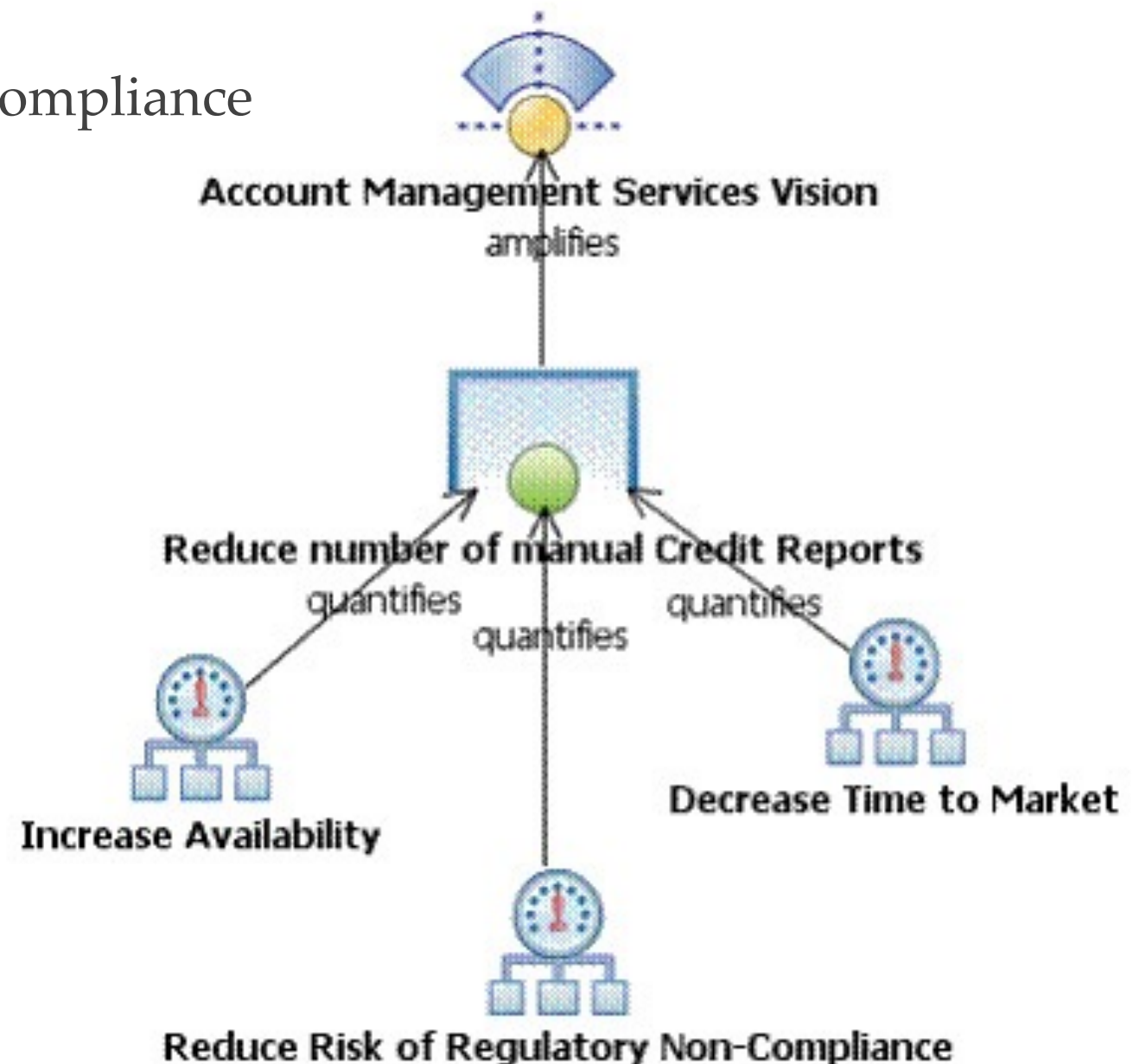
- ❖ Reduce number of manual Credit Reports
- ❖ Increase customer satisfaction
- ❖ Reduce Cost and Latency
- ❖ Improve sales and customer service
- ❖ Enhance productivity
- ❖ Increase value and reach
- ❖ Reduce risk and increase consistency



# BMM Example - Ends

## Objectives:

- Reduce number of manual Credit Reports
  - ❖ Increase availability
  - ❖ Reduce risk of regulatory non-compliance
  - ❖ Decrease time to market

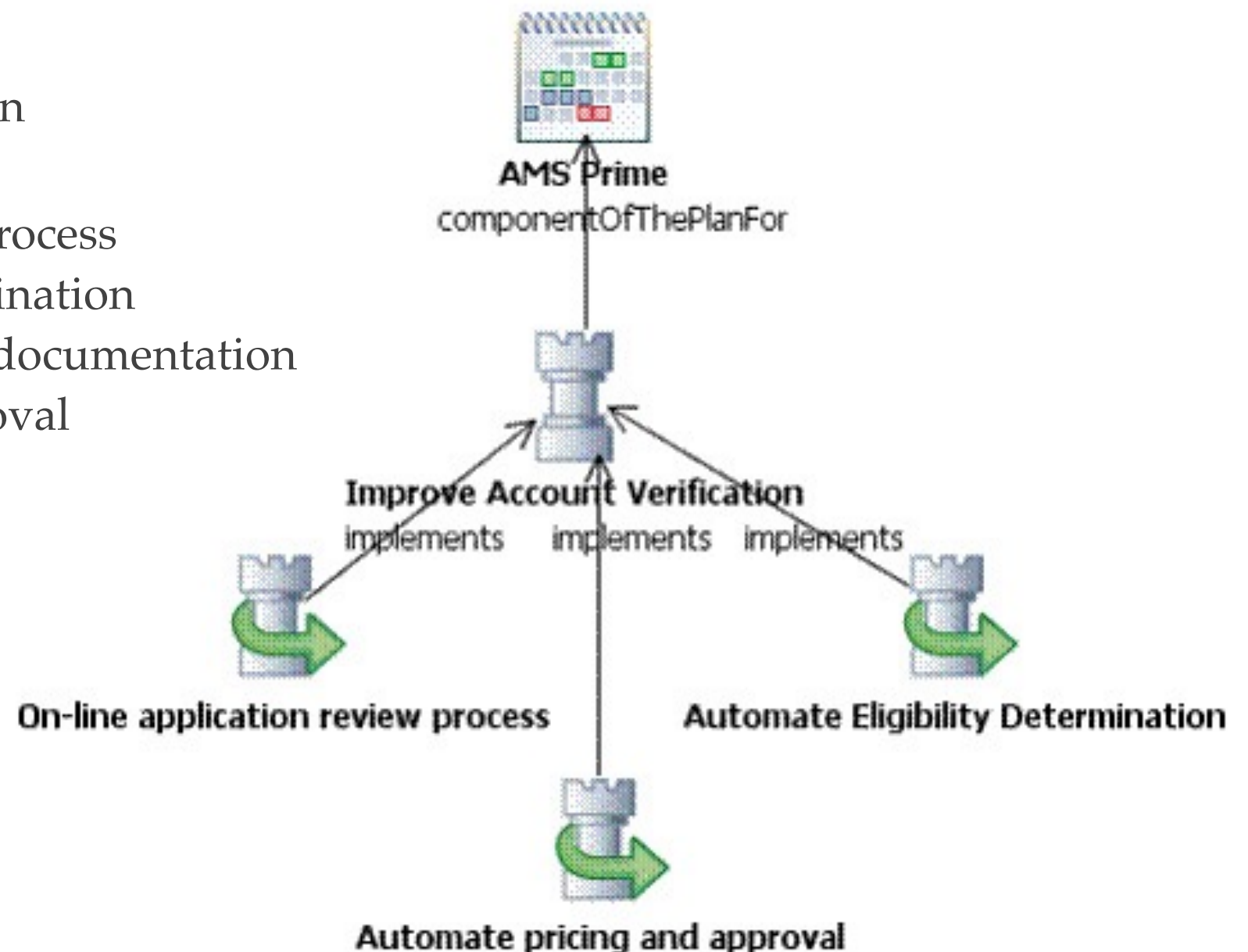




# BMM Example Business Means:

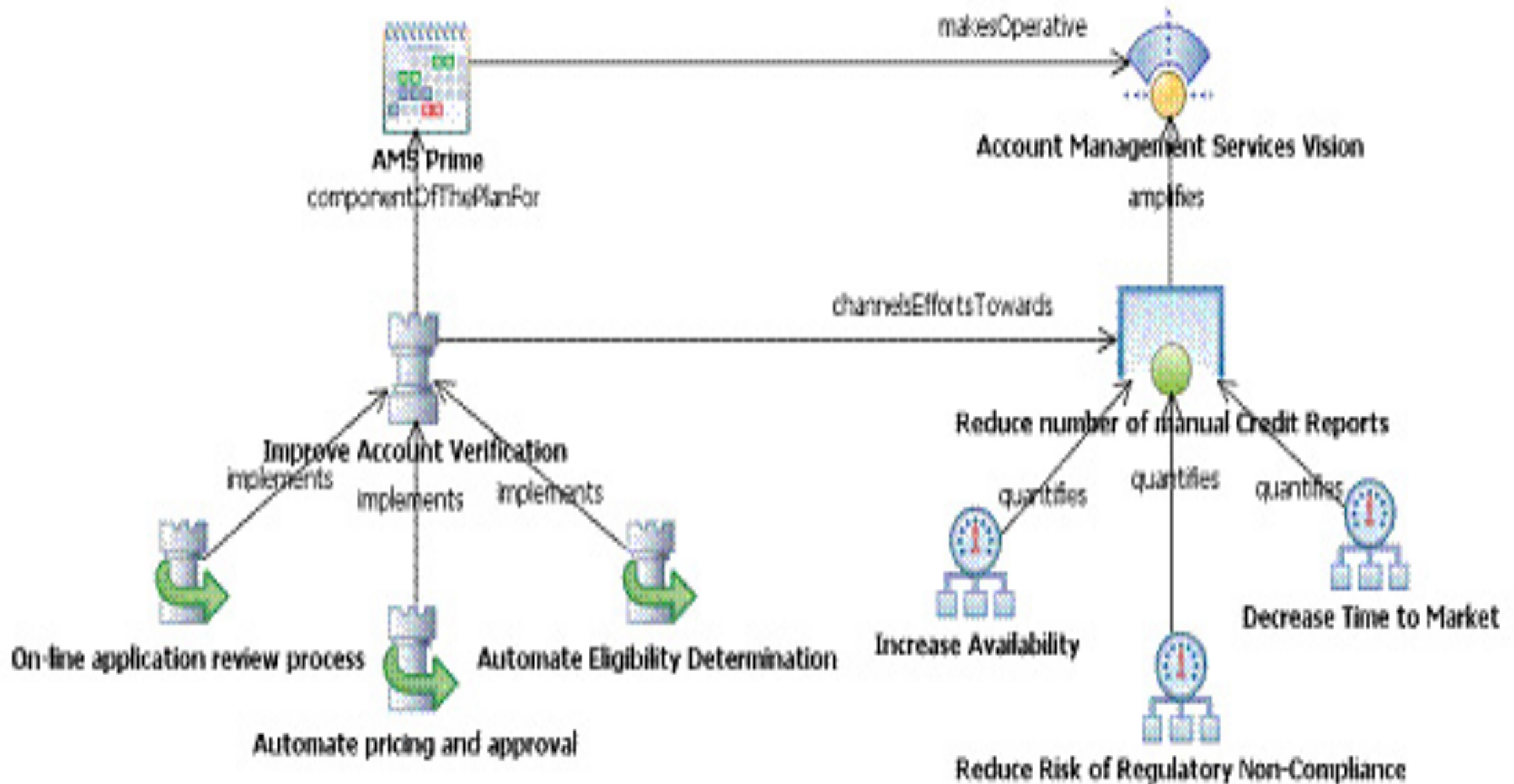
## ❖ Courses of Action:

- ❖ Mission – AMS Prime
- ❖ Strategies:
  - ❖ Improve Account Verification
- ❖ Tactics
  - ❖ Online application review process
  - ❖ Automate eligibility determination
  - ❖ Reduce need for additional documentation
  - ❖ Automate pricing and approval





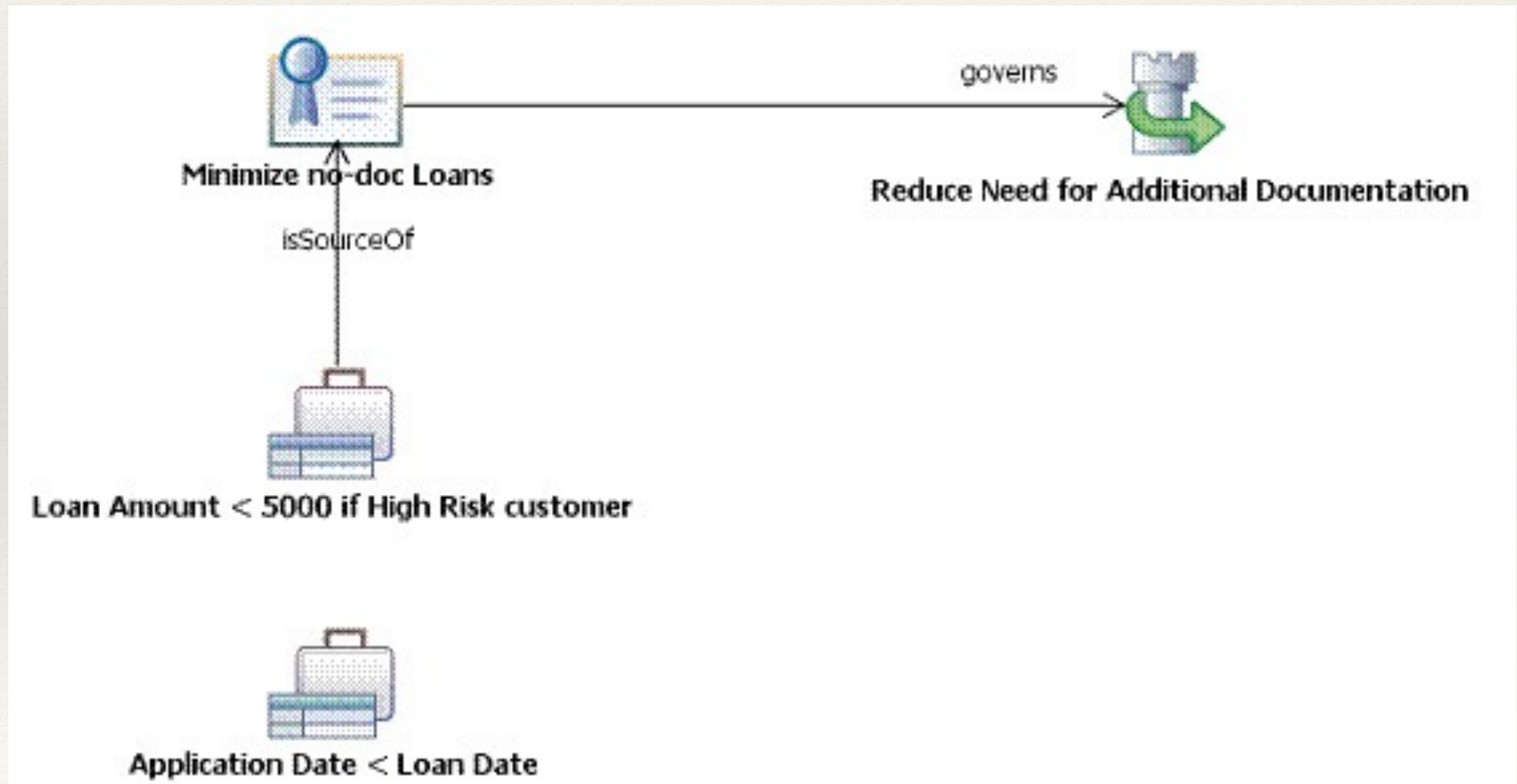
# BMM Example Business Means:





# BMM Example Policies

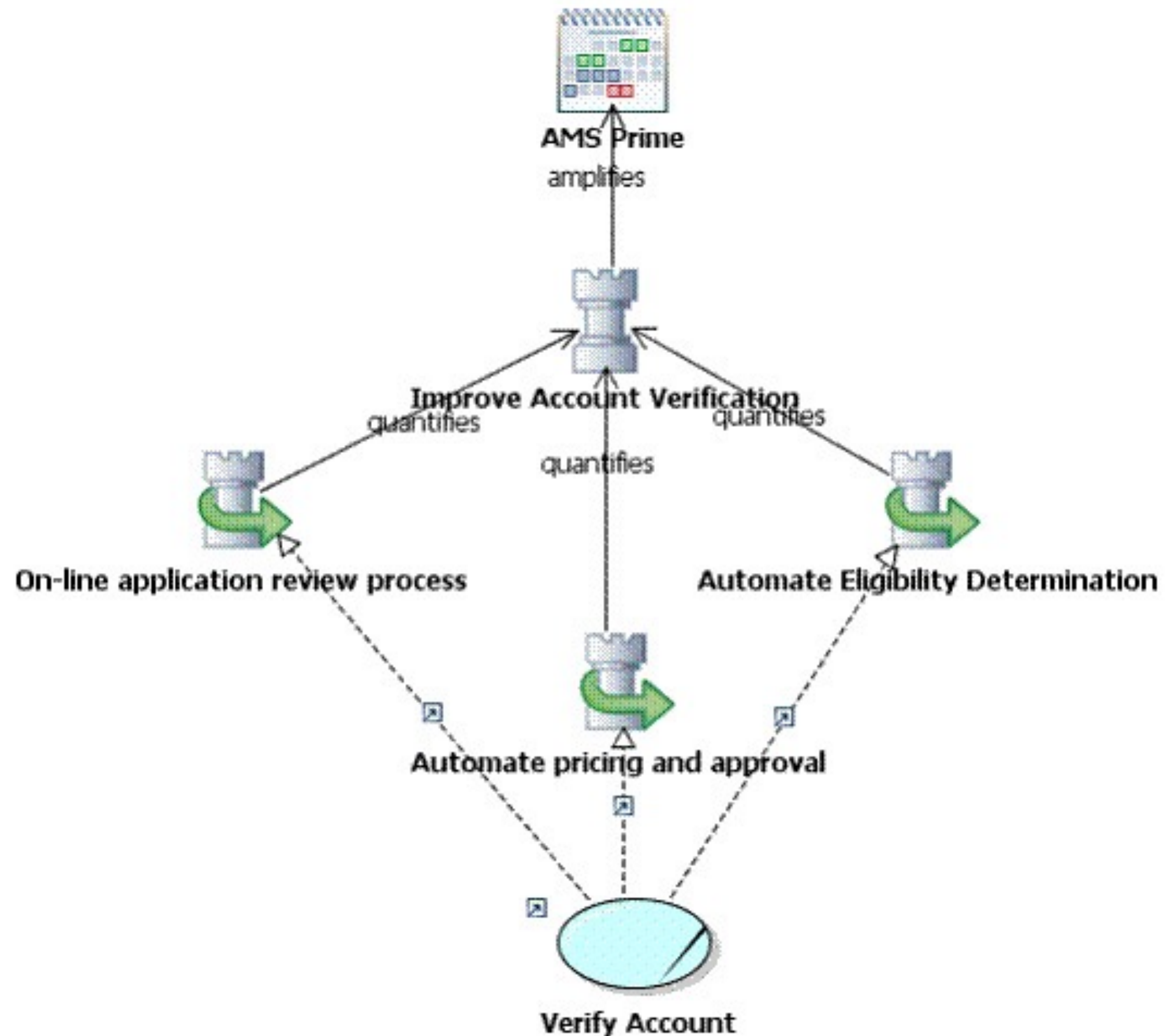
❖ Relevant policies and rules:





# BMM Example Use cases

- ❖ Business Use Cases to capture requirement details from the perspective of key external stakeholders:





# BMM Example Traceability

- ❖ Connection of the requirements to business components, system use cases, processes, service collaborations, or any other model element:

