

Business Motivation Modelling

Prof. Dr. Knut Hinkelmann



Literature

- David M. Bridgeland, Ron Zahavi (2009). *Business Modeling – A Practical Guide to Realizing Business Value, Chapter 3.* Morgan Kaufman Publishers/OMG Press.
- OMG Business Motivation Model, Version 1.0
 - ◆ <http://www.omg.org/spec/BMM/1.0/PDF>

Motivation

■ Fundamental to the Business Motivation Model is the notion of **motivation**:

- ◆ If an enterprise prescribes a certain approach for its business activity, it ought to be able to say ‘**why**,’ i.e.
- ◆ What result(s) is the approach meant to achieve

■ Different sources for motivation

- ◆ Business perspective
- ◆ IT perspective



Motivation Modeling and Strategy Creation

- Two approaches how Business Motivation Models can support strategy creation
 - ◆ **model-based strategy creation**: modeling is part of strategy creation
 - ◆ **strategy first, model later**: models are used to capture the strategy and communicate them
- Examples for model-based strategy creation:
 - ◆ Strategy creation workshop
 - Capturing the strategy as models directly in these workshops supports conversation: discuss alternatives, see impact of choices
 - ◆ Incremental development or adaption of business strategy
 - Business motivation models are part of the communication process: explain the effect of new trends and how to exploit new trend as a new opportunity

(Bridgeland & Zahavi 2009, p. 43)



OMG Business Motivation Model

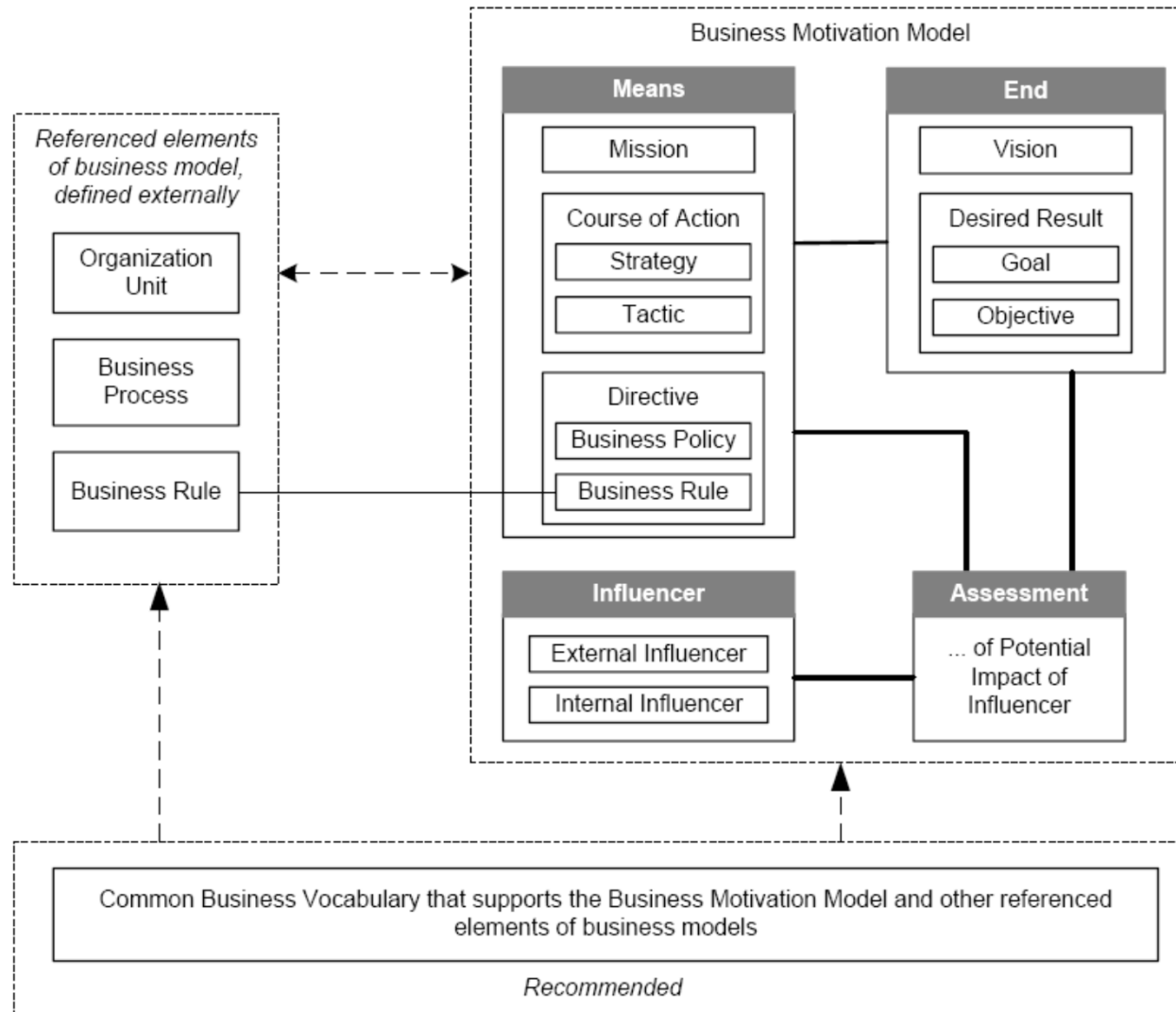
- Business Motivation Model (BMM) is an OMG Specification (www.omg.org/spec/BMM/1.0/PDF).
- Purposes:
 - ◆ To capture decisions about reaction to change and the rationale for making them
 - increasing clarity and improving decision-making by learning from experience.
 - ◆ To reference the outcomes of the decisions to their effect on the operational business (e.g. changes made to business processes and organization responsibilities),
 - providing traceability from influencers to operational change
- BMM does not specify a graphical look for BMM diagrams.

Key Ideas of the OMG Business Motivation Model

- Business Perspective
- Motivation
- Reaction to Change
- Separation of concerns
- Decomposition
- Metrics

For details see: OMG, Business Motivation Model, Version 1.0, chapter 7.2
<http://www.omg.org/spec/BMM/1.0/PDF>

Overview of the BMM Structure

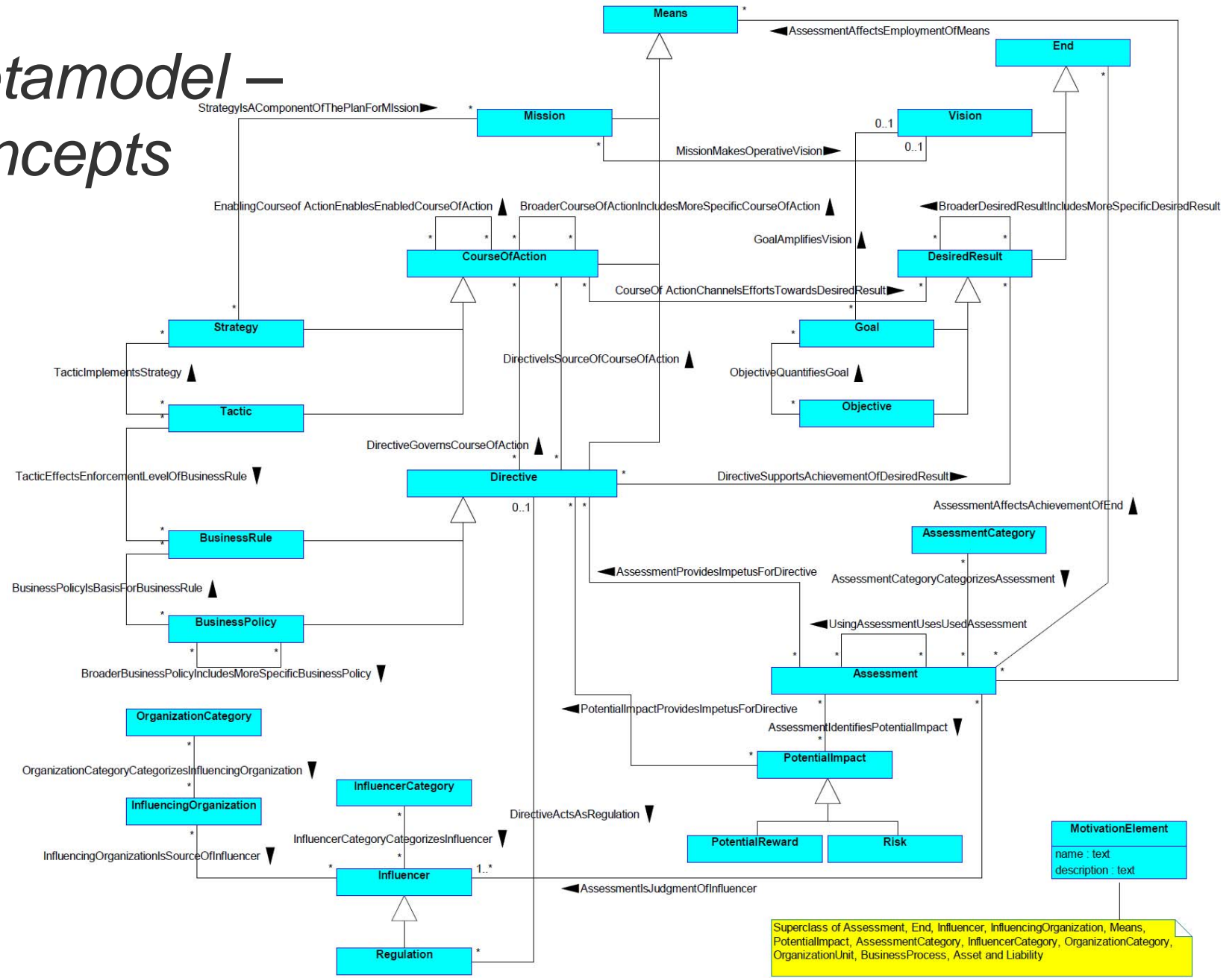


BMM Concepts

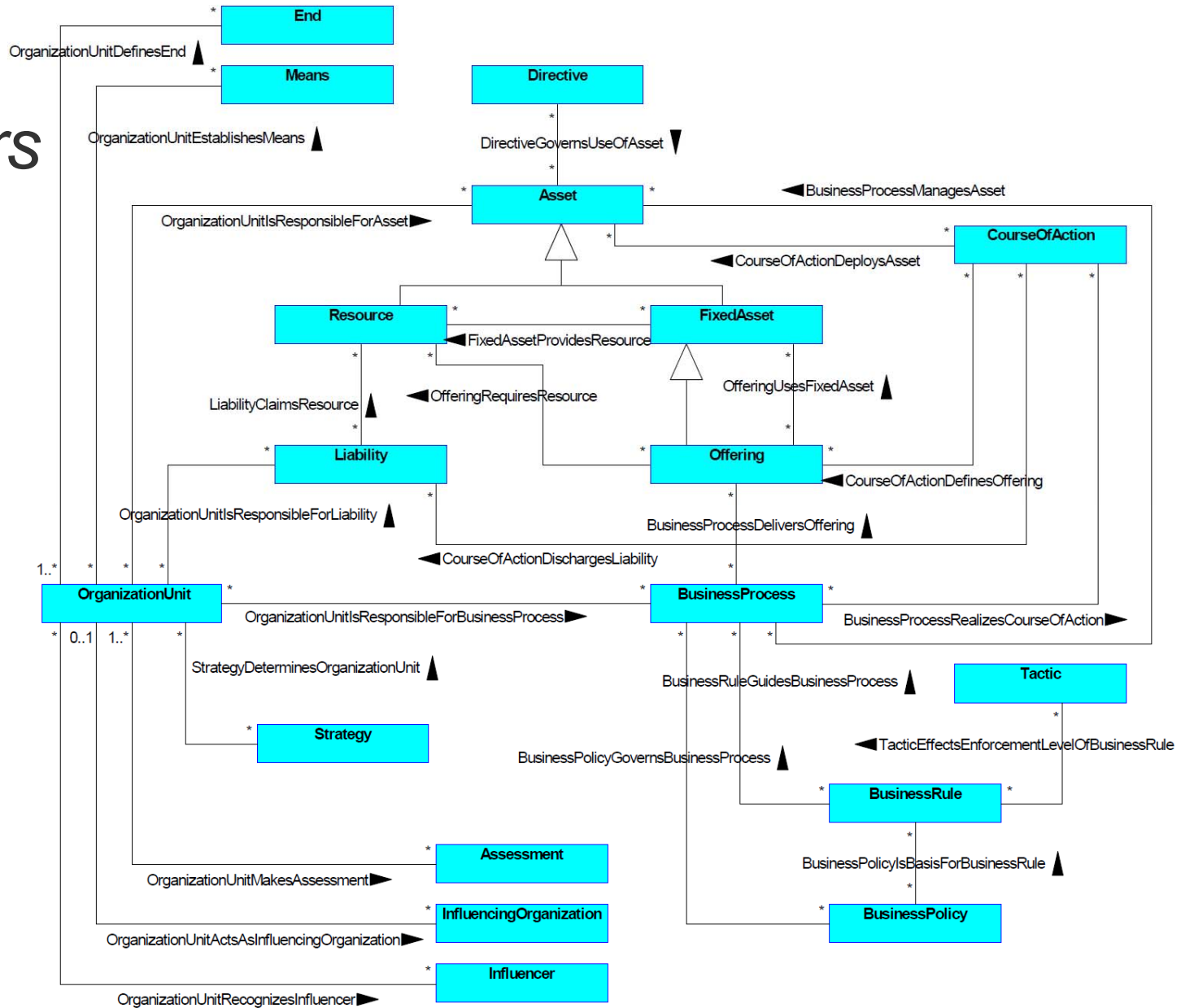
BMM distinguishes between

- Core Concepts – defined within the BMM
 - ◆ Ends, Means, Influencer, Assessment, ...
- Placeholders – referenced by the BMM but defined in other specifications
 - ◆ Business Process, Business Rule, Organisation Unit, Asset, Liability

BMM Metamodel – Core Concepts



BMM Placeholders



Representation of BMM Elements

- The OMG BMM does not prescribe the form of representation.
- Any BMM element should have
 - ◆ a name
 - ◆ a description
- Descriptions allow names to be short, so model elements can be easily referenced

Graphical Representation

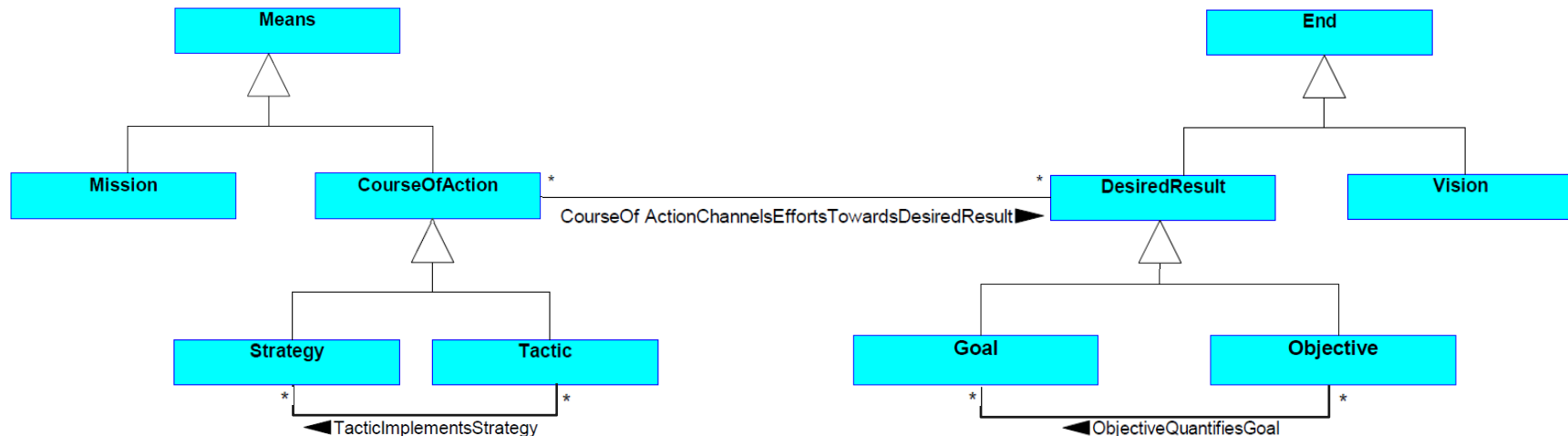
- BMM 1.0 does not specify a graphical look for BMM diagrams
- In this chapter we use a graphical look for BMM diagrams created by (Bridgeland & Zahavi 2009) and model using the Agilian BMM model type

Means - Ends

■ The general terms

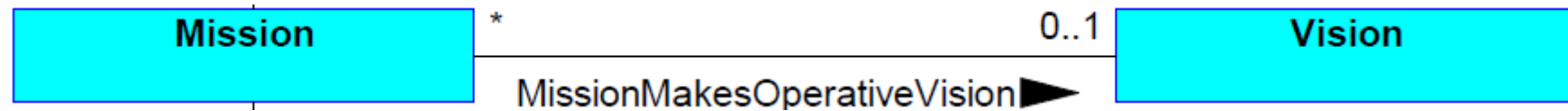
- ◆ **End** refers broadly to any of the ‘aspiration’ concepts (Vision, Goal, Objective)
- ◆ **Means** refer generally to any of the ‘action plan’ concepts (Mission, Strategy, Tactic).

Means can be changed without changing the ends; vice versa is, perhaps, not so common.



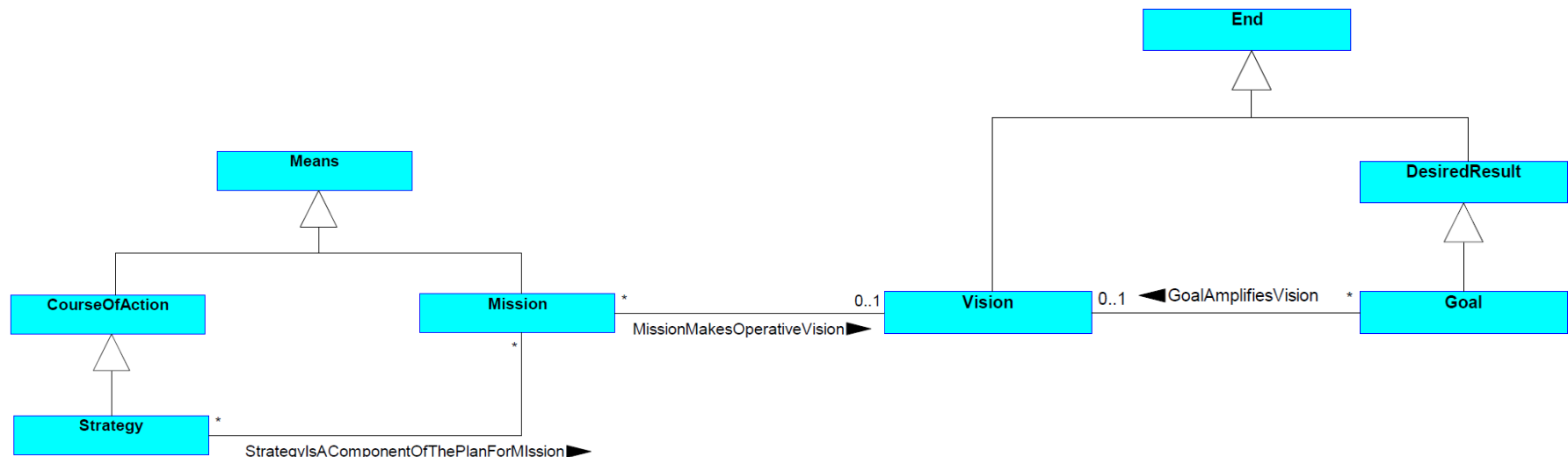
Mission - Vision

- A cornerstone of any work addressing motivation has to be
 - ◆ the enterprise's aspirations: its **Vision**
 - ◆ its action plans for how to realize them: its **Mission**



Mission - Vision

- A **Mission** indicates the ongoing operational activity of the enterprise.
- The Mission describes what the business is or will be doing on a day-to-day basis.
 - ◆ A Mission *makes a Vision operative* — that is, it indicates the ongoing activity that makes the Vision a reality.
 - ◆ A Mission is *planned by means of Strategies*.
- A **Vision** describes the future state of the enterprise, without regard to how it is to be achieved.
- A Vision is often compound, rather than focused toward one particular aspect of the business problem.
 - ◆ A Vision is supported or *made operative* by Missions.
 - ◆ A Vision is *amplified by Goals*.



Examples of Visions and Missions

Visions:

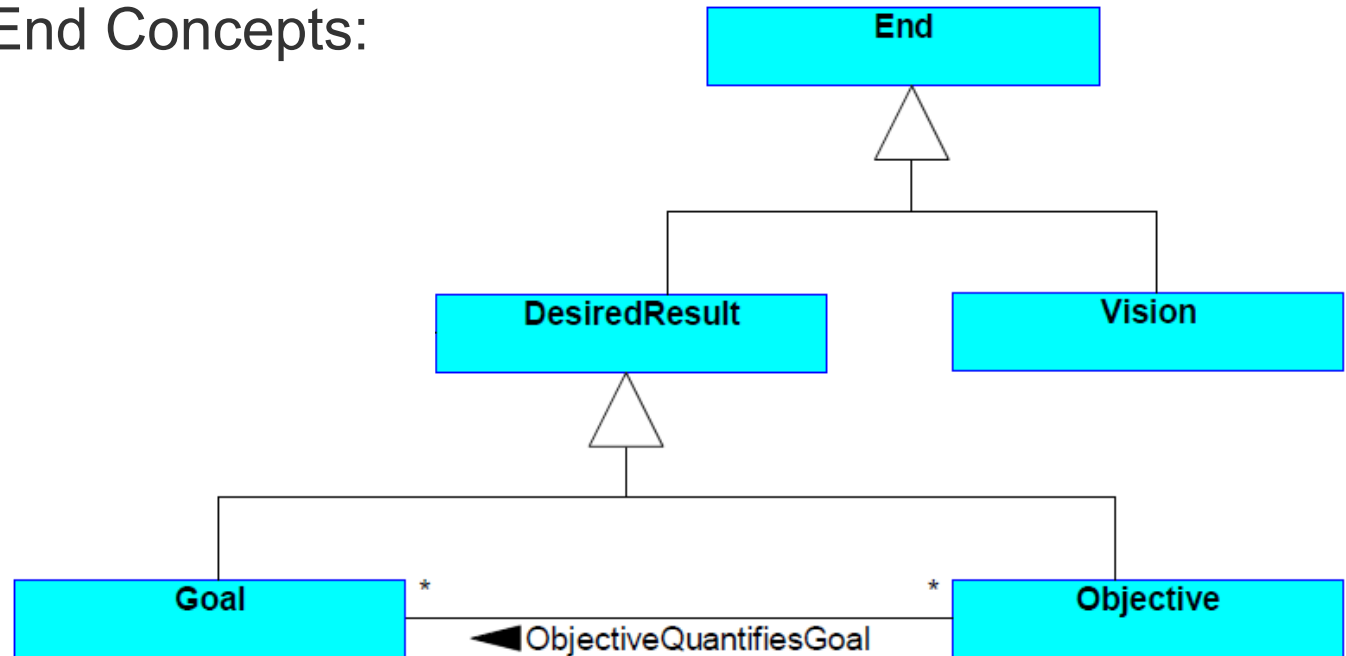
Enterprise	Vision
EU-Rent	Be the car rental brand of choice for business users in the countries in which we operate.
Pizza Company	Be the city's favorite pizza place.
Consulting Company	Be the premier consulting company in the industry.
Retail Pharmacy	Be the low-cost health care provider with the best 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.

Missions:

Enterprise	Mission
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.

Core Elements of the BMM: End

- An End is something the business seeks to accomplish
 - ◆ It does not include any indication of **how** it will be achieved.
 - ◆ It is useful to document who *defined* the End and at what point in time, so that an audit trail exists for future reference.
 - ◆ Hierarchy of End Concepts:

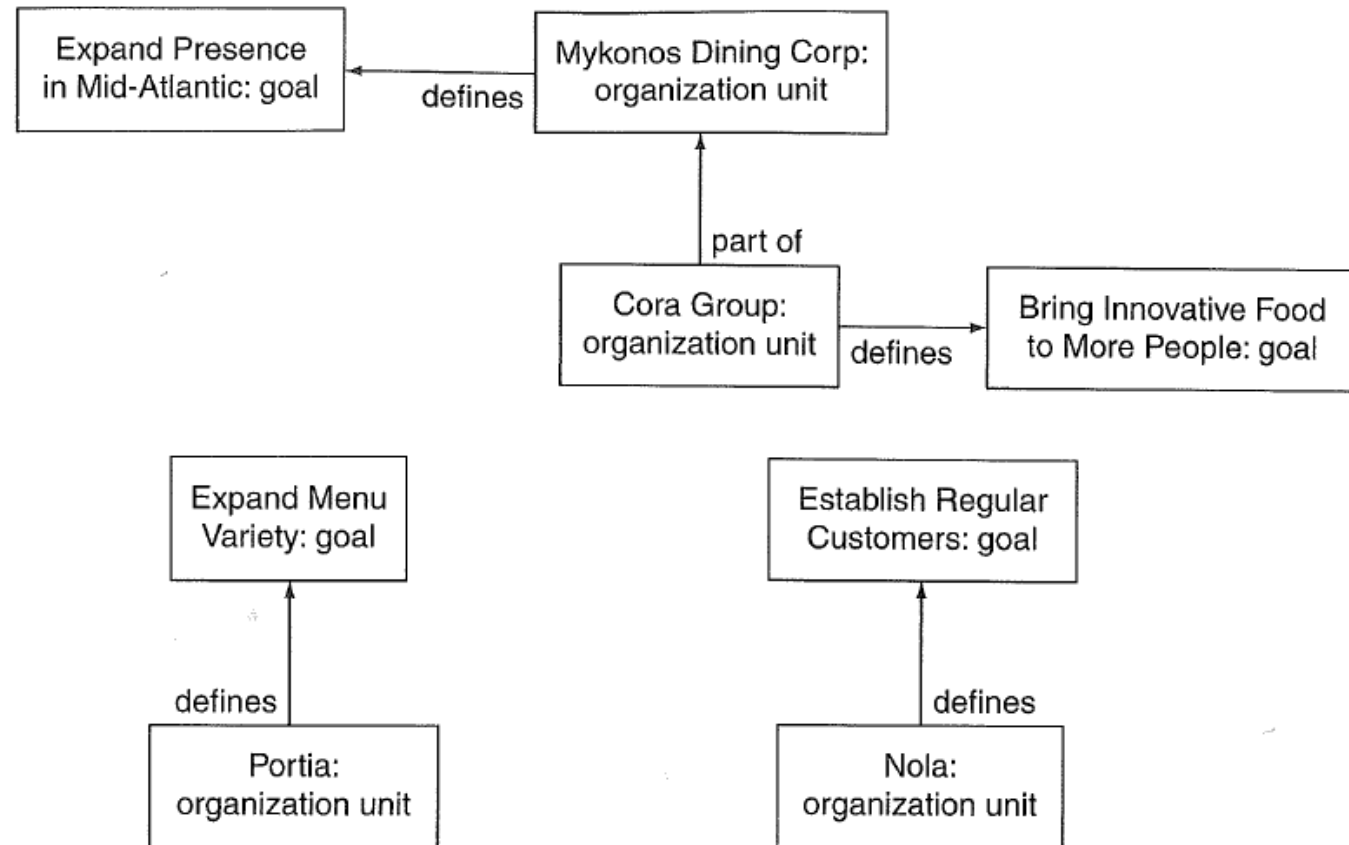


Goals

- Motivation modeling is about the achievement of goals.
- A goal is an end result - something an organisation is trying
 - ◆ to achieve *for its own sake*
 - ◆ rather than a means to some other end
- Example:
 - ◆ **Expand Menu Variety** is a goal
 - ◆ **Offer Daily Specials** is not a goal but a means to expand menu variety (i.e. **Offer Daily Specials** is a strategy – strategies are attempted to achieve goals not for their own sake)

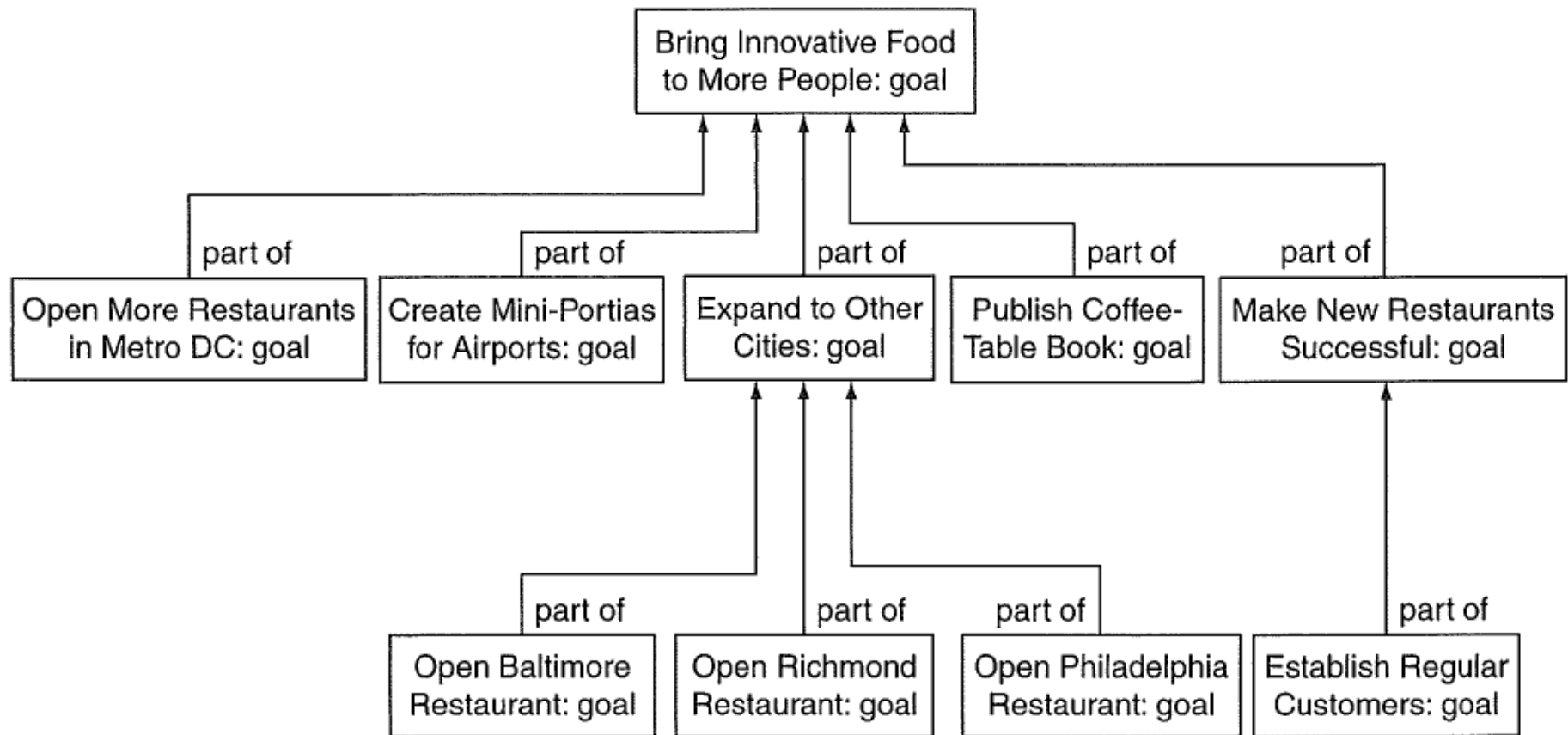
Goals and Organizations

- A goal is defined by an organisation that is trying to achieve the goal



Goal Hierarchies

- Larger Goals are often decomposed into subgoals

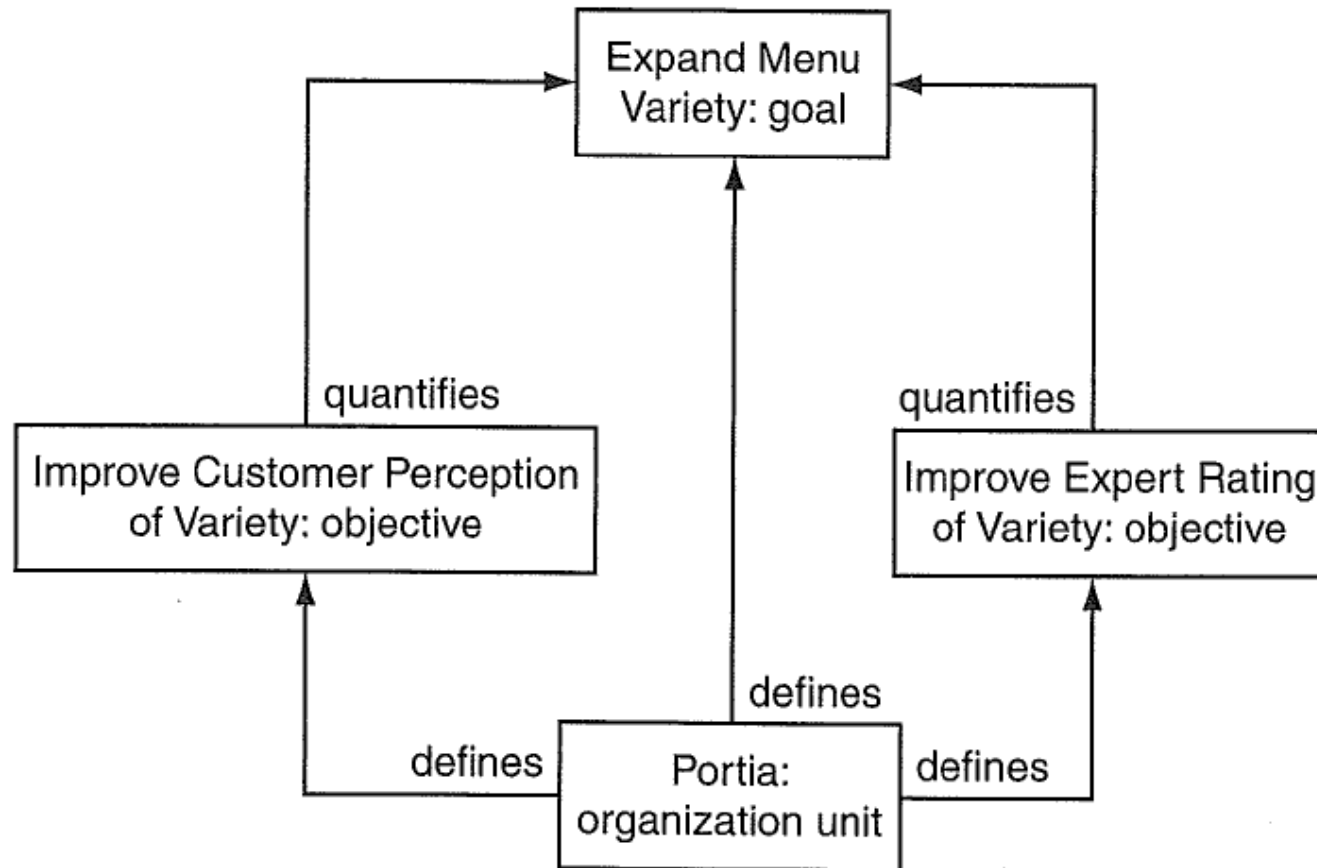


Objectives

- Goals are complemented by objectives
- *Objectives are desired results like goals*, but they are specific about both timing and measurement
- An Objective is a statement of an attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve a Goal.
 - ◆ SMART: **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime-Based
- Example:
 - ◆ The objective **3 City Openings by End of Year** *quantifies* the goal **Expand to Other Cities**
 - by a measurement – three cities
 - a timing – by end of the year

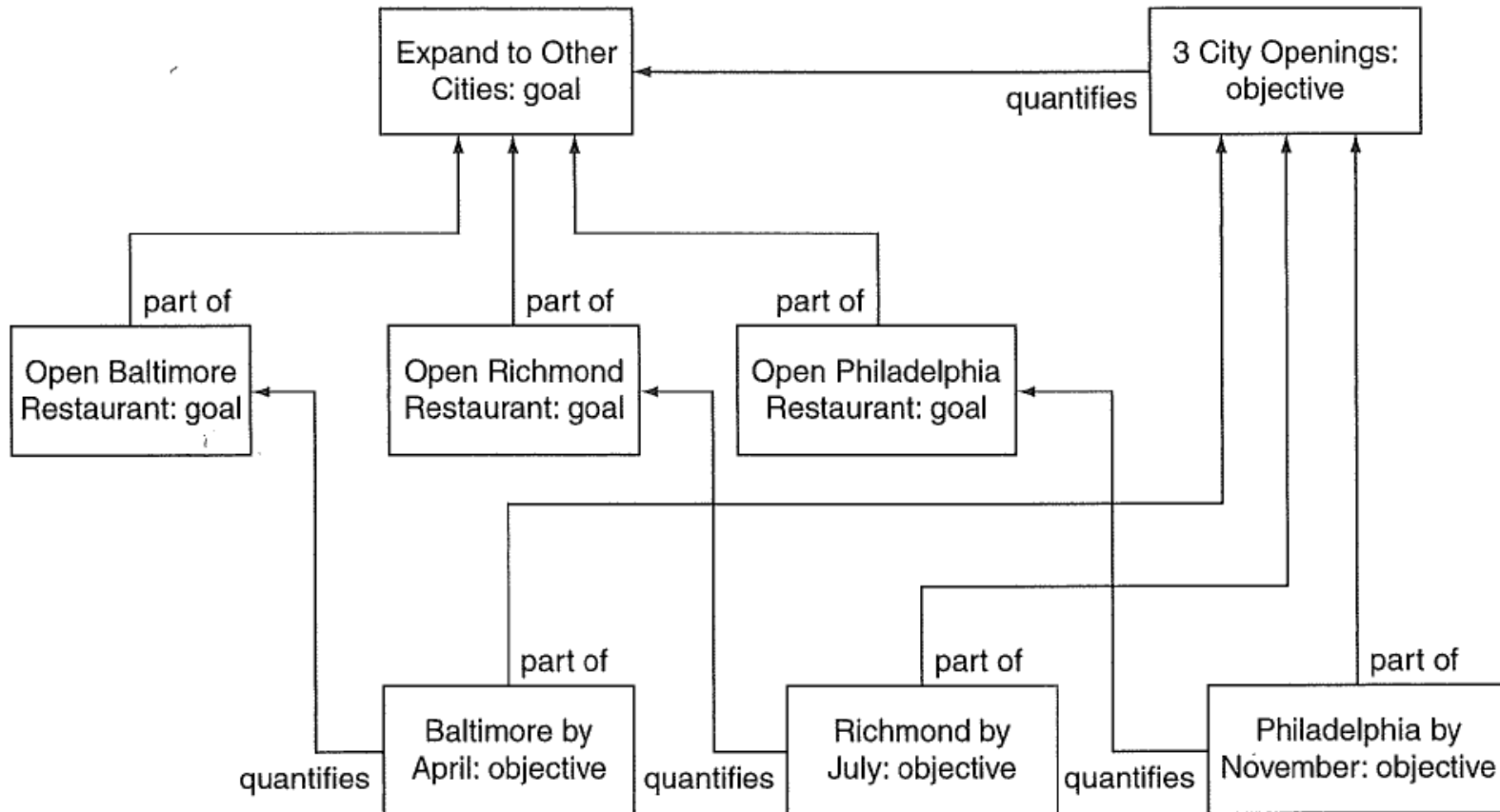
Objectives, Goals and Organisation

- Objectives – like goals – are defined by organisations.



Hierarchies of Objectives and Goals

- Objectives – like goals – can be organized into a hierarchy



Desired Results and Courses of Action

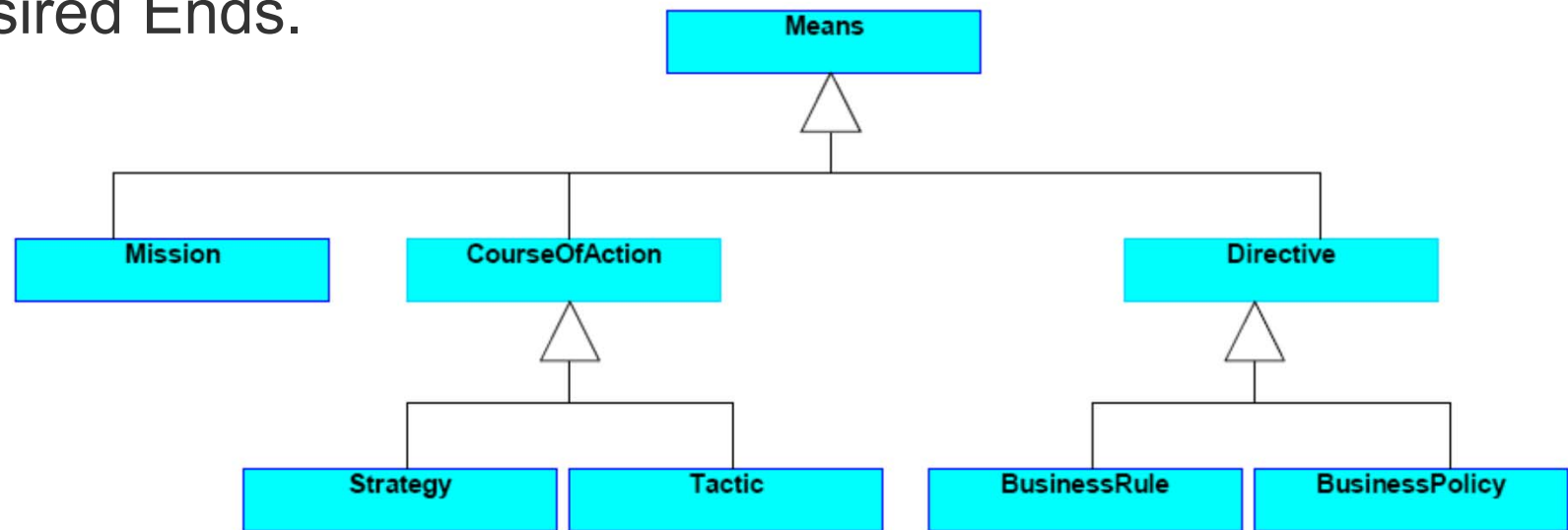
- Objectives and goals are similar in that they are both desired results
- Both *courses of action* and *desired results* are things the organization is trying to accomplish.
 - ◆ A desired result is something an organization is trying to do for its own sake
 - ◆ Courses of actions are means to the other ends, i.e. they are ways to achieve the goals and objectives
- The difference between courses of action and desired result is the difference between journeys and destinations
 - ◆ A course of action is the journey
 - ◆ A desired result is the destination

Desired Results and Courses of Action - Example

- Assume that a restaurant adds two goat dishes to the menu
 - ◆ If the head chef does this because he always wanted to serve goat, then **Add Goat Dishes** is a desired result
 - ◆ If he added the goat dishes in an effort to have some new newspaper articles then **Add Goat Dishes** is a course of action achieve a goal like **Increase Media Coverage**
- There is a difference in failing desired results or courses of action
 - ◆ If **Add Goat Dishes** is a desired result then the failure to achieve it is the end of the story
 - ◆ If **Add Goat Dishes** is a means to achieving the goal **Increase Media Coverage**, then the failure to achieve it will lead to a search for other ways of getting media coverage

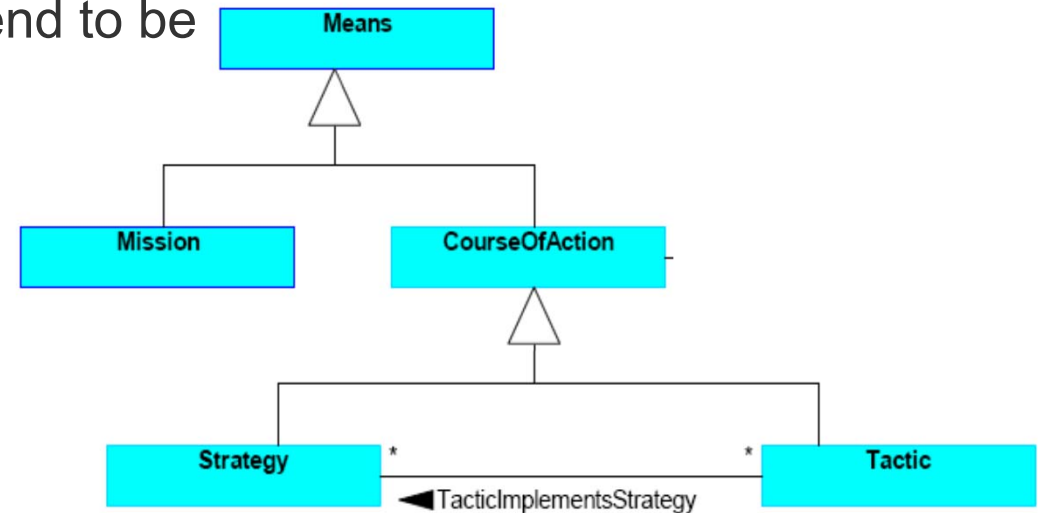
Core Elements of the BMM: Means

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



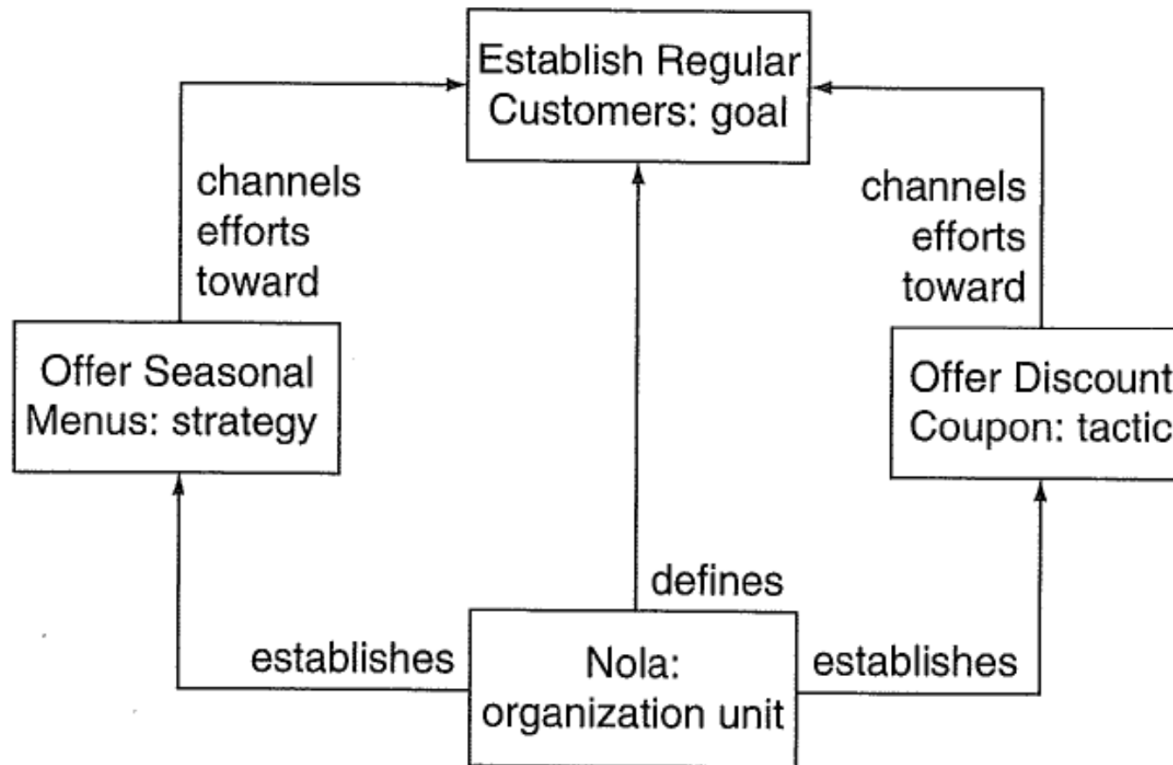
Strategies and Tactics

- Courses of action come in two varieties
 - ◆ strategies
 - ◆ tactics
- The difference between the two is a matter of size and commitment. Compared to tactics, strategies tend to be
 - ◆ longer term
 - ◆ broader in scope
 - ◆ harder to change



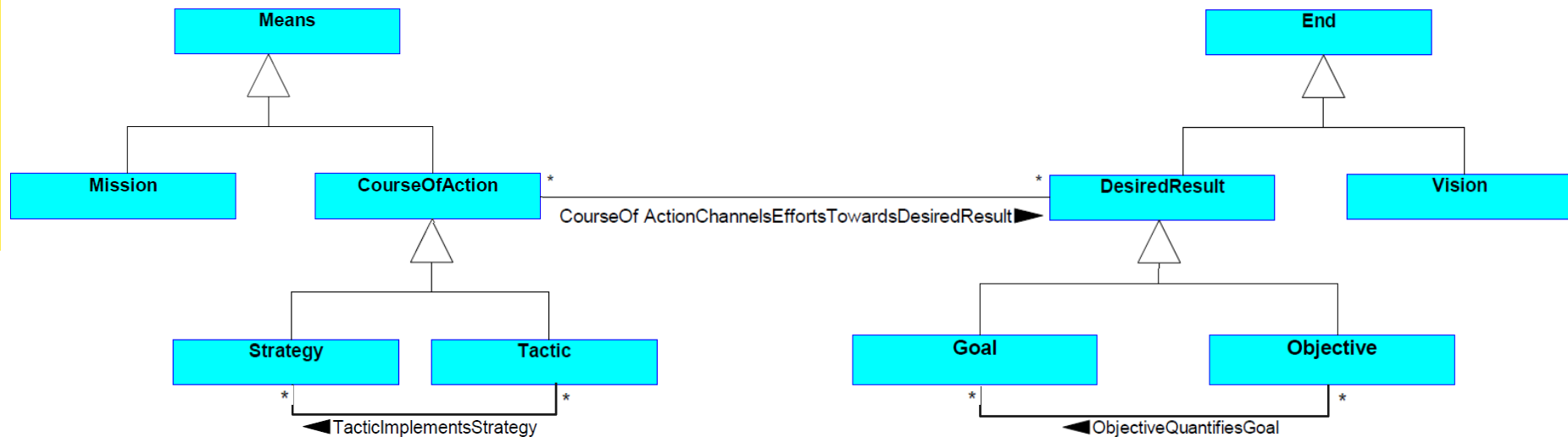
- A *Tactic implements* Strategies
- For example, the Tactic **Call first-time customers personally** implements the Strategy **Increase repeat business.**

Example: A strategy and a tactic



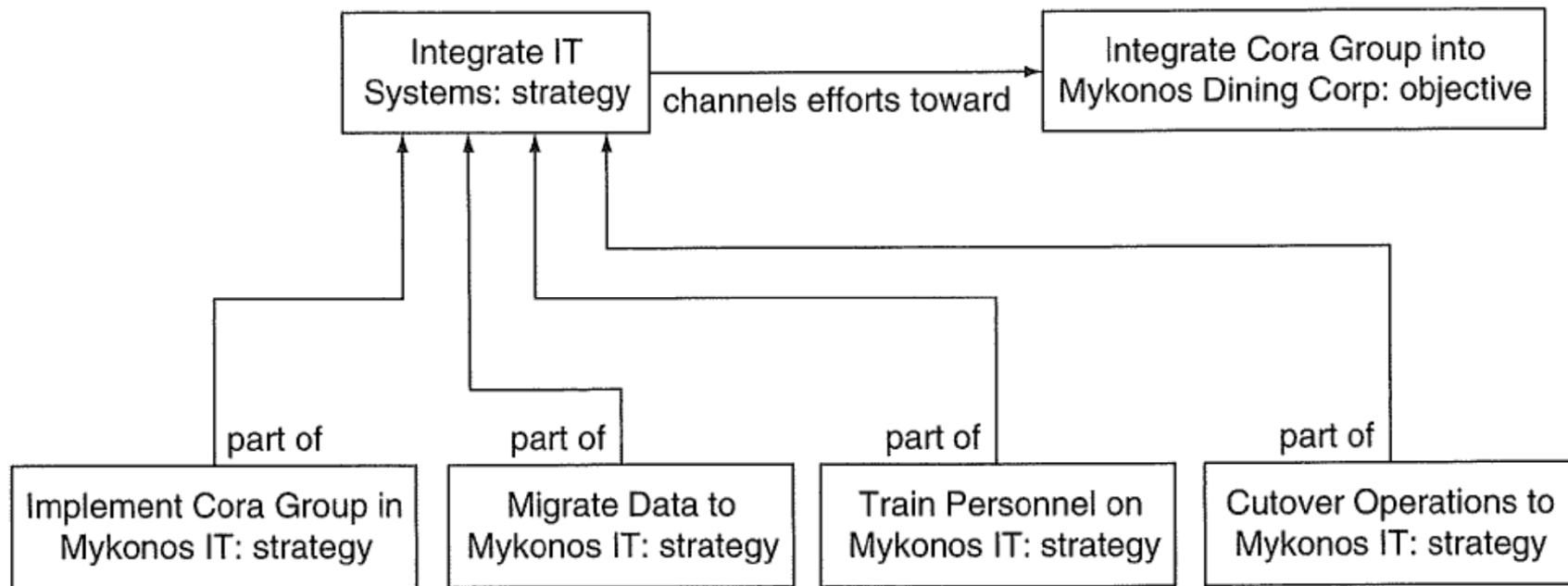
Strategies and Tactics

- A Strategy represents the essential Course of Action to achieve Ends.
- A Strategy usually *channels efforts towards* those Goals.
- Tactics generally *channel efforts towards* Objectives.



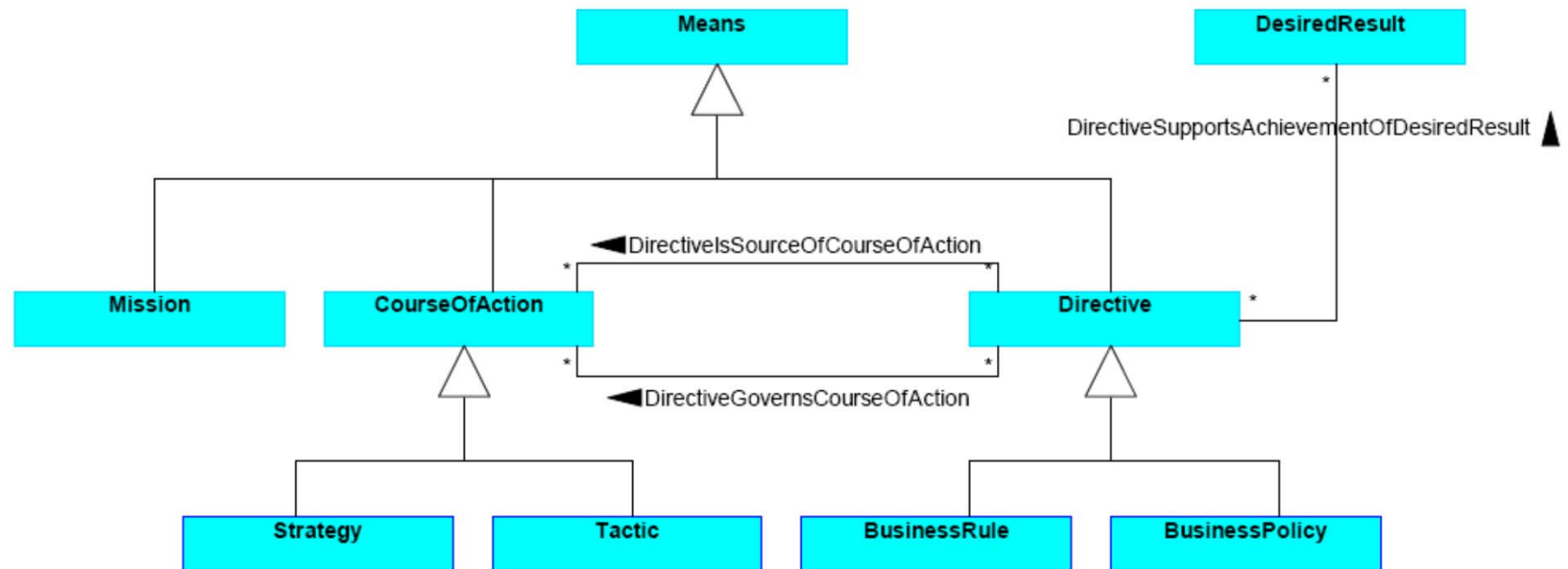
Hierarchies of Strategies

- Strategies can be decomposed into sub-strategies
- Hierarchies of tactics are less common since tactics are small enough to be implemented on their own.



Directive

- Directives indicate how the Courses of Action should, or should not, be carried out—they *govern* Courses of Action.
- Example: the Business Rule “Pizzas may not be delivered beyond a radius of 30 miles” governs the Strategy “Deliver pizzas to the location of the customer's choice.”
- Directive includes two concepts: Business Policy and Business Rule



Business Policies and Business Rules

- A Business Policy is a non-actionable Directive whose purpose is to govern or guide the enterprise.
 - ◆ Business Policy can be formulated in response to an Opportunity, Threat, Strength, or Weakness.
 - ◆ Business Policies provide the *basis for* Business Rules. Business Policies also *govern* Business Processes.
- 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.
 - ◆ Often, a Business Rule *is derived from* Business Policy. Business Rules *guide* Business Processes.
- Compared to a Business Rule, a Business Policy tends to be
 - ◆ less structured, less discrete, and not focused on a single aspect of governance or guidance.
 - ◆ less compliant with standard business vocabulary, and less formally articulated.

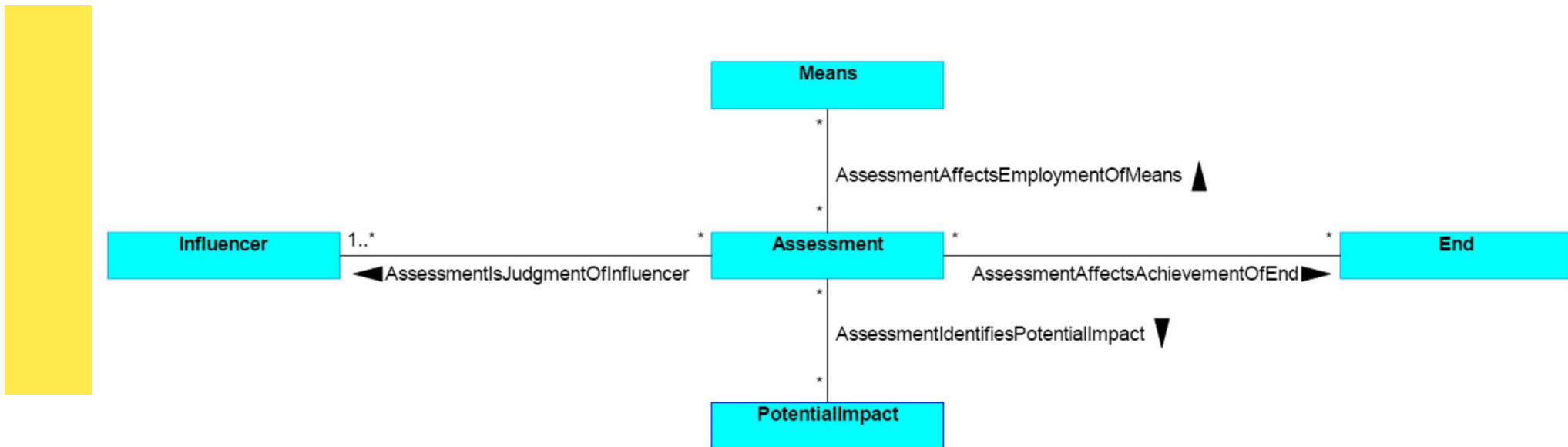


Examples of Business Policy

Source	Business Policy
EU-Rent	<p>Depreciation of rental cars must be minimized.</p> <p>Compare the (non-actionable) Business Policy with related (actionable) Business Rules:</p> <ul style="list-style-type: none"> • <i>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.</i> • <i>A Rental cannot be extended by phone if the Car's odometer reading is greater than (next service mileage – 500).</i>
EU-Rent	<p>Rental payments must be guaranteed in advance.</p> <p>Compare with Business Rule based on this policy:</p> <ul style="list-style-type: none"> • <i>A provisional charge for the estimated cost of the Rental must be made against a valid credit card held by the Renter before the Car is handed over.</i>
EU-Rent	<p>Rental cars must not be exported.</p> <p>Compare with Business Rule based on this policy:</p> <ul style="list-style-type: none"> • <i>An 'out of country' car can be rented only on a one-way rental with drop-off at a branch in its country of registration.</i>
EU-Rent	Rental contracts are made under the law of the country in which the pick-up branch is
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.

Influencers and Assessment

An *assessment* is an evaluation of an *influencer's* potential effect on *ends* and *means* of a business



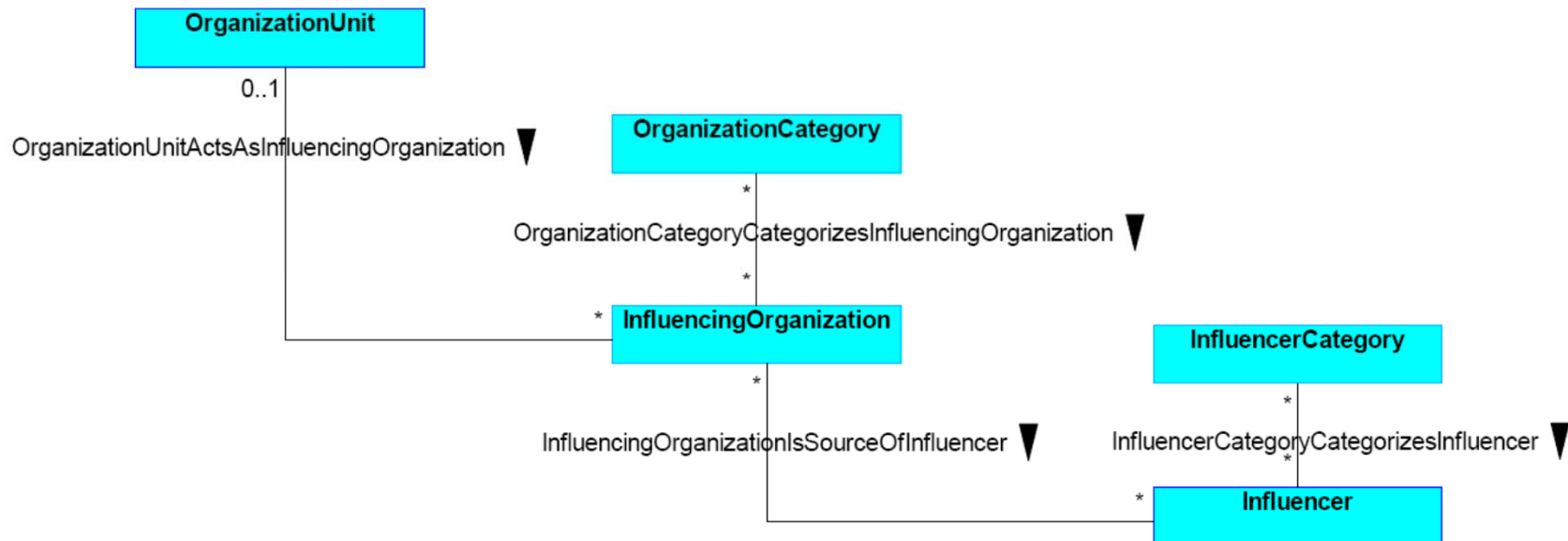
Influencers

- An influencer is anything that can have an effect on an organization, anything that can potentially hinder it or assist it.
- Every business will have hundreds of potential influencers.
- In practice we model only the influencers that affect
 - ◆ our strategies and tactics (i.e. the means)
 - ◆ our goals and objectives (i.e. the ends)
- Influencers are neither good nor bad
 - ◆ They only become good or bad if they are judged as opportunities, threats, strengths or weaknesses (see assessments)
- Influencers should be stated in a neutral, factual manner.

Categories of Influencers

- There are different Categories of Influencers, broad ones are
 - ◆ Internal Influencers
 - ◆ External Influencers

- An Influencing Organisation
 - ◆ influences the enterprise
 - ◆ is external to the enterprise modeled in the given BMM



Categories for External Influencers

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.
	or restricts.

Examples for External Influencers of EU-Rent

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	Market research has determined that customers: <ul style="list-style-type: none"> generally accept that the rates for 'premium brand' car rental companies will be higher than the 'cheap and cheerful' competition. tend to see 'on-airport' companies as premium and 'off-airport' as cheap and cheerful. 	Customer
EU-Rent	Car parking and storage in city centers is limited and expensive.	Environment
EU-Rent	The car rental market in Eastern Europe growing year-on-year by at least 5% per year.	Environment
EU-Rent	All on-airport car rental companies offer similar types of car, and are physically lined up in a row. If any promotes a special offer, others react almost immediately, so there is very little room for maneuver against competitors on product, service. or price.	Environment & Competitors
EU-Rent	Laws and regulations in each country of operation for: <ul style="list-style-type: none"> driver license and insurance; roadworthiness of cars, including emissions; protection of customer personal information. 	Regulation
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



Examples of External Influencers for Cora Group

External Influencer	Category
A Fast-food Restaurant has opened close to Portia Restaurant	Competitor
Increasing Public Interest in Ethnic Fare	Customer
Innovative Restaurant Shortage in Western Suburbs	Environment
Emergence of Diner Restaurant Reviews	Environment
New Anti-smoking Regulation	Regulation

Categories for Internal Influencers

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.

Examples for Internal Influencers of EU-Rent

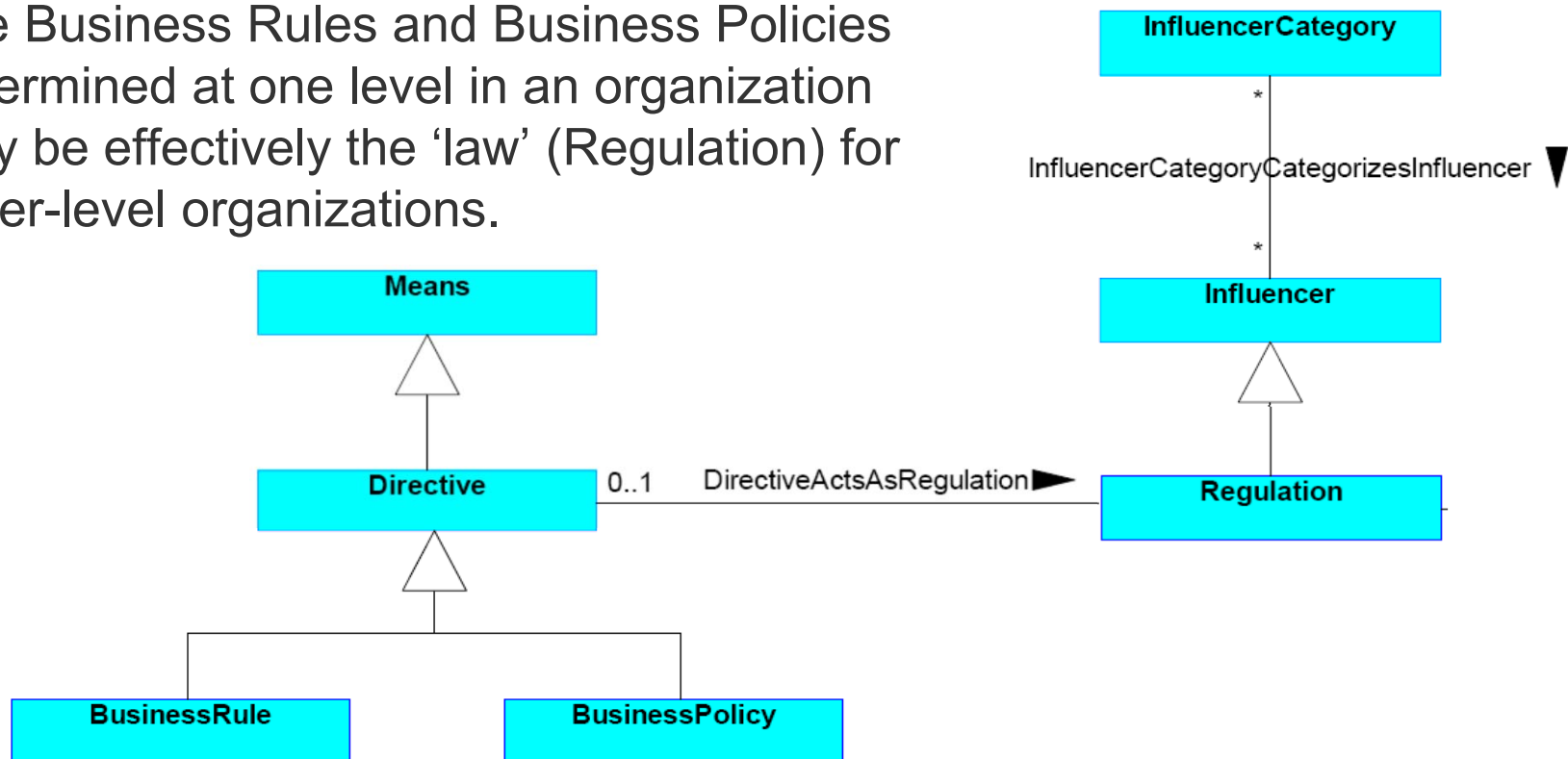
Enterprise	Internal Influencer	Category
EU-Rent	EU-Rent needs to expand its business year on year.	Assumption
EU-Rent	A loyalty rewards program is essential for attracting business customers.	Assumption
EU-Rent	Successful branch managers are usually allowed to remain at their branches for as long as they want to.	Habit
EU-Rent	Cars are owned by local areas, not by rental branches. The cars owned by a local area are available to all branches in the area.	Infrastructure
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	EU-Rent is environment-friendly. All the car models it offers for rental have good fuel economy and low emissions.	Explicit Corporate Value
EU-Rent	EU-Rent offers quality, service and value for money, rather than lowest possible price.	Explicit Corporate Value
EU-Rent	Rental branch staff are supportive of colleagues and customers. For example, if there is a long queue of customers, they will help colleagues on the counter without needing direction from the manager to do so, and may delay a rest break until the queue is cleared.	Implicit Corporate Value

Examples of Internal Influencers for Cora Group

Internal Influencer	Category
Cora has to expand ist business year on year	Assumption
Managers are generally promoted from within the company	Habit
New waiters receive two days introductory training. Further training is informal, on the job.	Habit
Cash registers are used with personal key card	Infrastructure
Small Space	Infrastructure
Closing for Events Disappoints some customers	Issue

Directive as Regulation

- Regulation is an Influencer Category explicitly defined by BMM
- A Directive may *act as* some other Organization Unit's Regulation.
- The Business Rules and Business Policies determined at one level in an organization may be effectively the 'law' (Regulation) for lower-level organizations.



Assessment

- An assessment is an evaluation of an influencer's potential effect on business
- BMM supports a general categorization of Assessment
 - ◆ Strength: advantage or area of excellence within the enterprise
 - ◆ Weakness: area of inadequacy within the enterprise
 - ◆ Opportunity: some Influencer can have a favorable impact
 - ◆ Threat: some Influencer can have an unfavorable impact
- Different people or groups of people might make different Assessments of the very same Influencers— and perhaps even the same person or group of people at different points in time.
- It is 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

Assessment

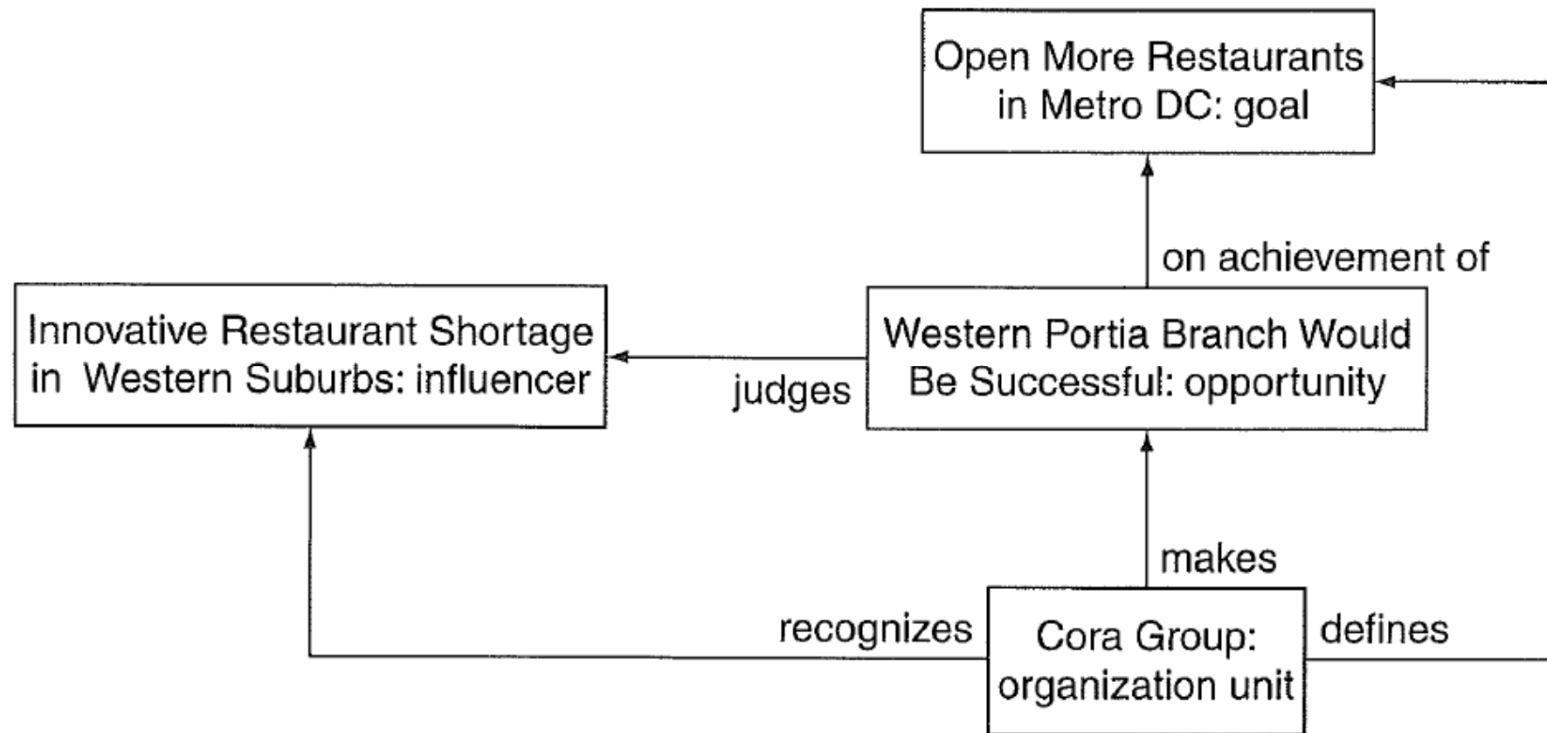
- Varieties of Assessments
 - ◆ An external influencer that is judged to be favorable is an opportunity
 - ◆ An external influencer that is judged as unfavorable is a threat
 - ◆ A positive assessment of an internal influencer is a strength
 - ◆ A negative assessment of an internal influencer is a weakness
- Strength, Weaknesses, Opportunities and Threads could be determined by a SWOT analysis

	Internal	External
Positive	Strength	Opportunity
Negative	Weakness	Threat

Opportunities

- An opportunity is a favorable situation for a business for achieving its goals
- Someone may judge that an influencer presents an opportunity
 - ◆ the influencer is a simple statement of the situation
 - ◆ the opportunity is the claim that the situation can be exploited for business advantage
- Example:
 - ◆ Assume that for a restaurant chain there is an Influencer **Innovative Restaurant Shortage in Western Suburbs**
 - ◆ This influencer could be judged as an opportunity to open a new restaurant: **Western Portia Branch Would Be Successful**

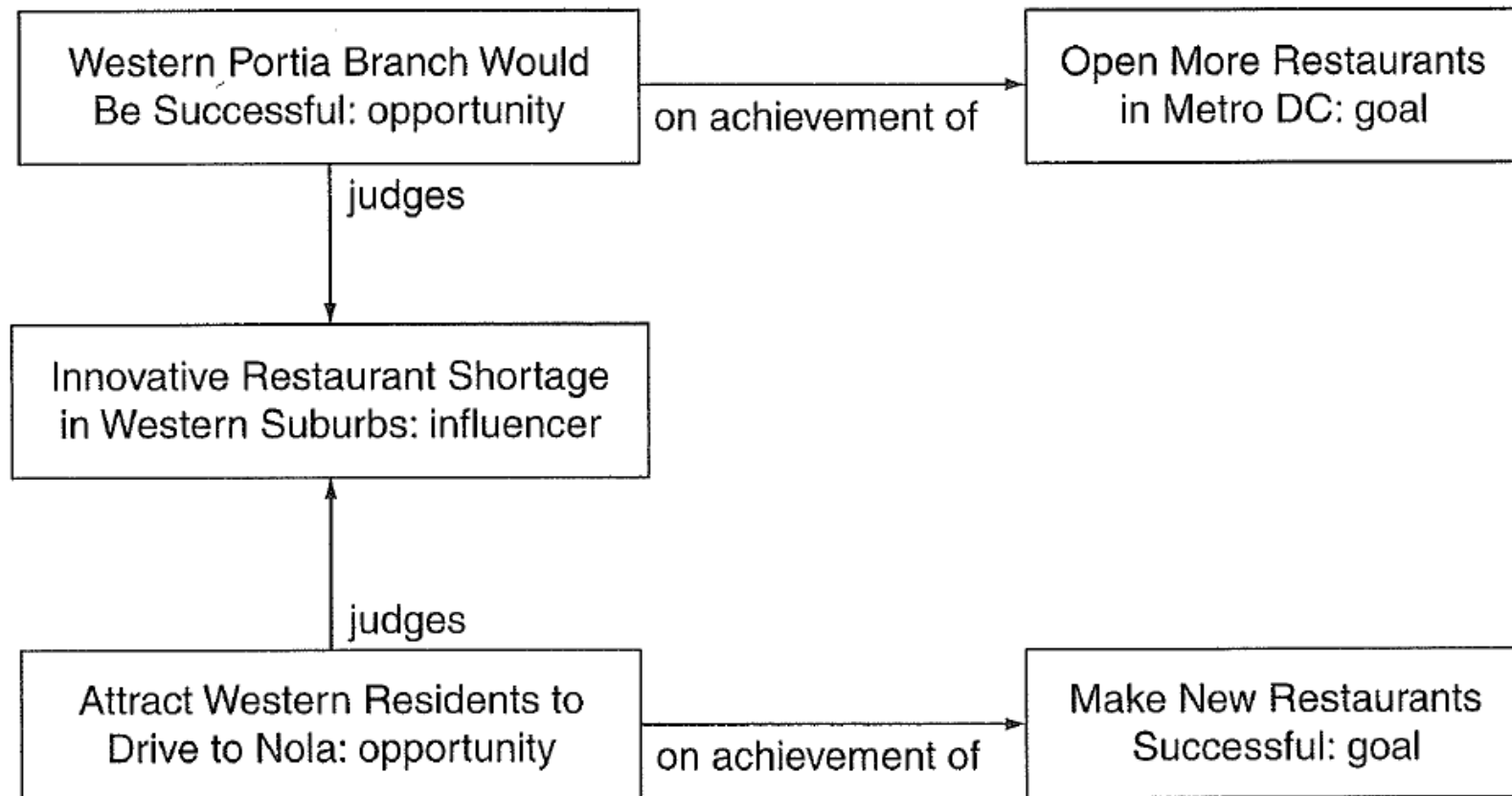
Example: An Influencer and an Opportunity



It is 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. In the above example is the judgement is made by the Cora Group organisational unit

Example: An Influencer and Two Opportunities

Sometimes a single influencer can help achieve more than one goal and so it is judged to be more than one opportunity



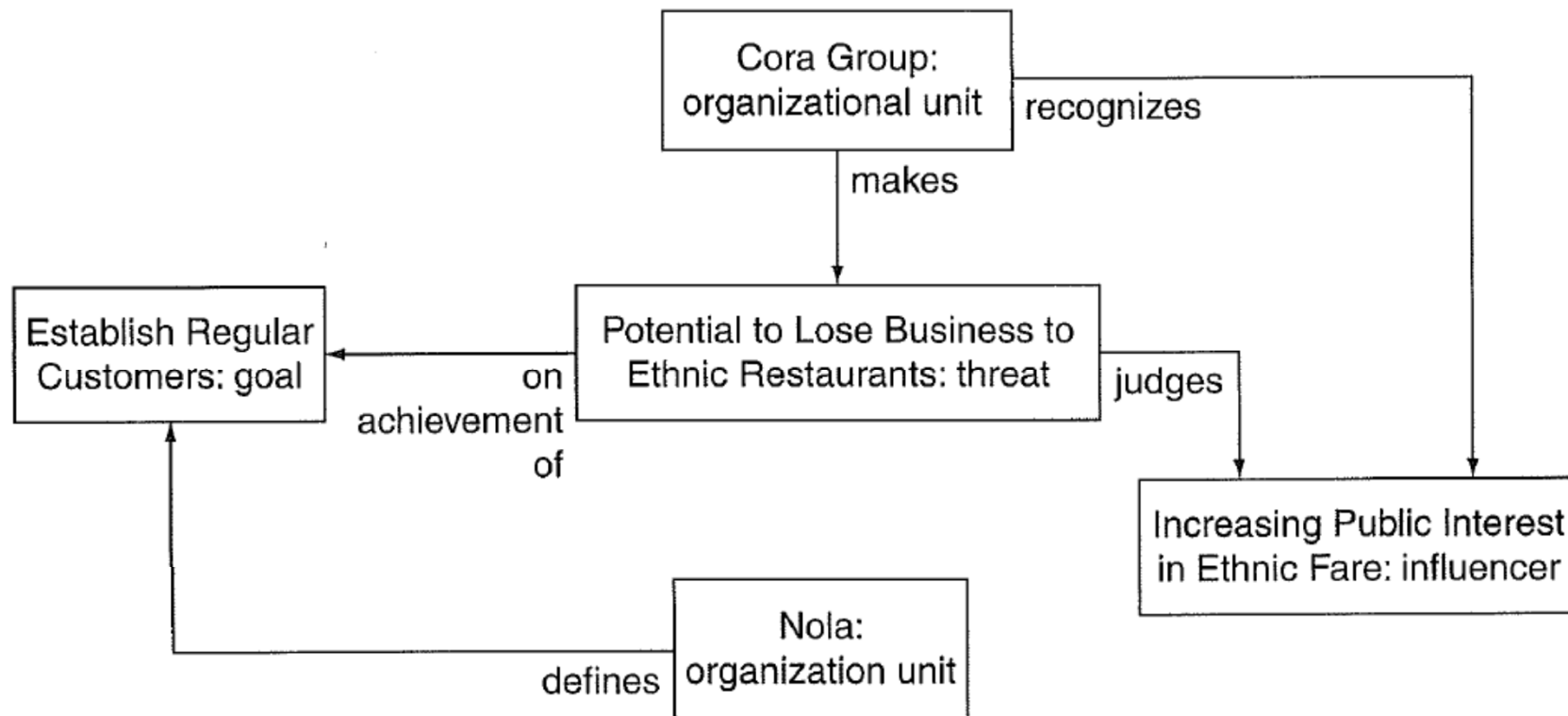
Opportunities and Strategies

An opportunity can affect the application of a strategy as well as directly affect the achievement of a goal.



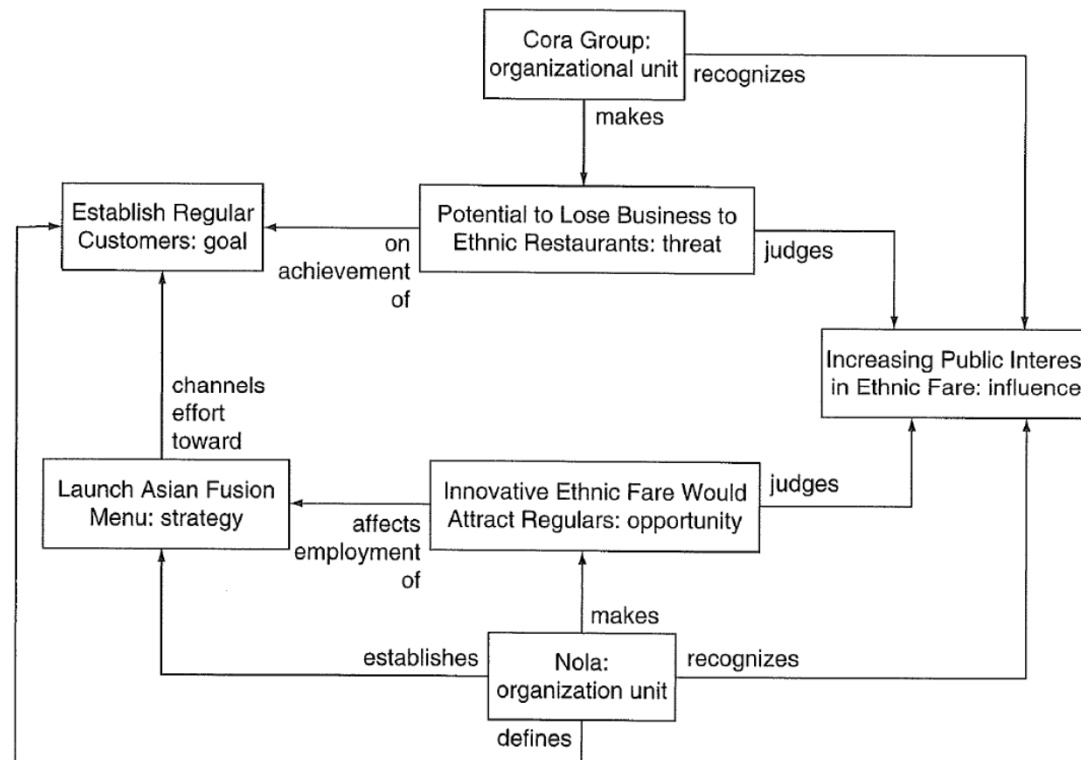
Threats

- Threats are just like opportunities except they are negative instead of positive
- A threat is modeled like an opportunity: a threat judges an influencer



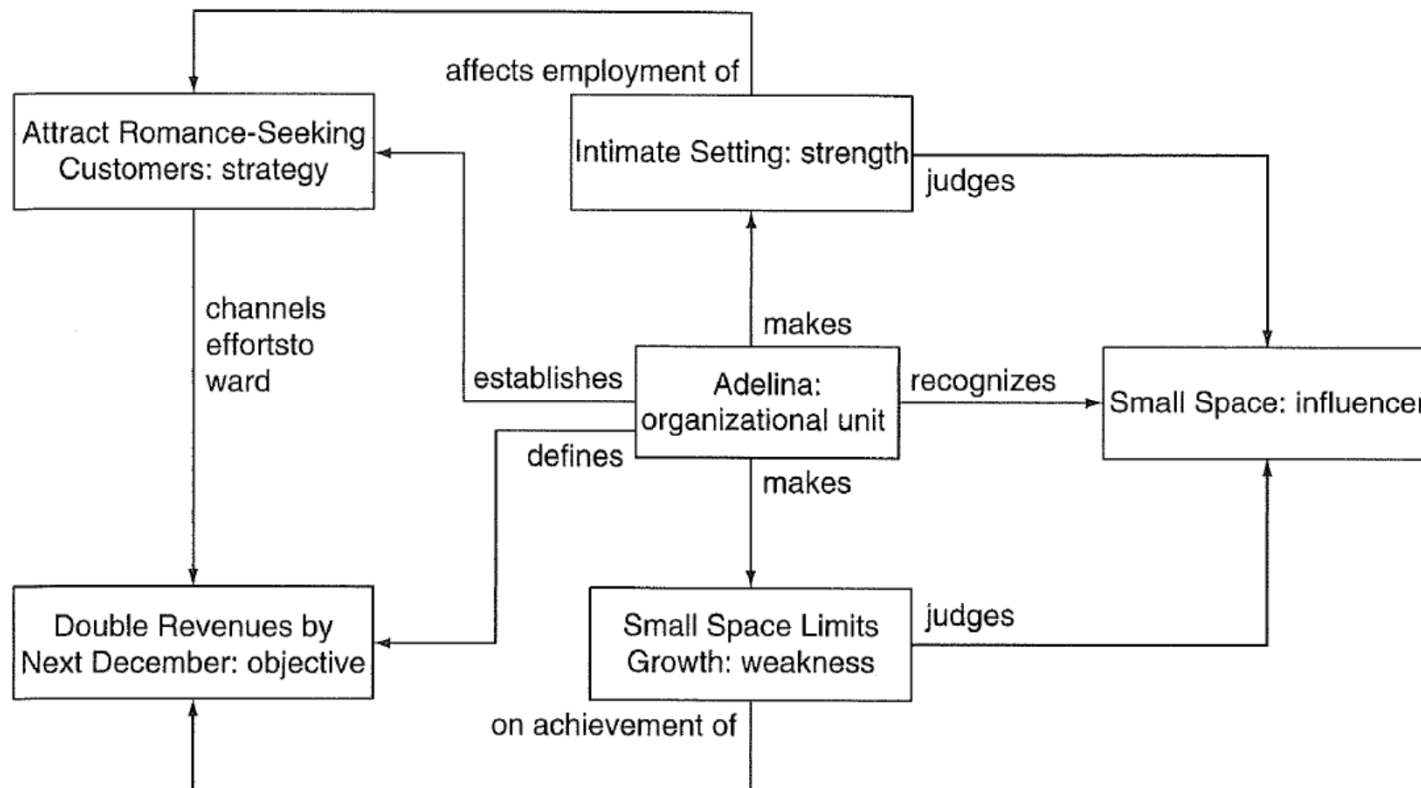
Influencers judged as Threat and Opportunity

- It can happen that a single influencer is judged as both opportunity and threat
- A motivation model can make these differences of opinion explicit
- Example:



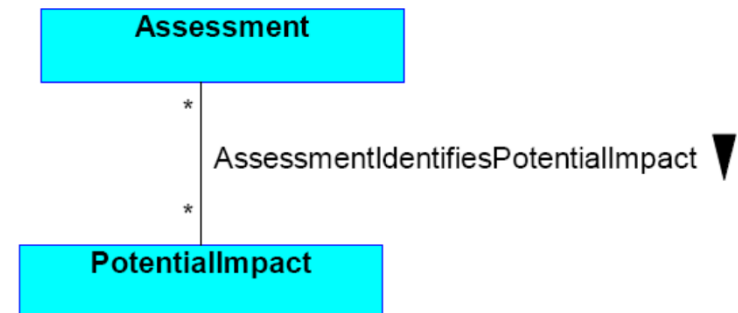
Strengths and Weaknesses

- Internal influencers can be judged as
 - ◆ strength if it helps the organisation to achieve its goals and strategies
 - ◆ weakness, if it inhibits the organization from such achievement



Potential Impact

- An Assessment records judgements about the impact (or potential for impact) of some Influencer on Ends and/or Means.
- In other words, an Assessment *identifies* some Potential Impact(s) that *is/are significant to* that Assessment.
- An Influencer may lead to the creation of a Business Policy *only* through an Assessment having been made that *identifies* some Potential Impact.
- Potential Impacts are categorized as
 - ◆ Risk: indicating the impact and probability of loss
 - ◆ Potential Reward: Indicating the probability of gain
- Risks are typically regarded to be negative impacts, whereas Rewards are considered positive



Examples of Risks and Potential Reward

Assessment	Risk
Opportunity: Innovative Ethnic Fare would attract regulars	Friends of American food might look for alternative restaurants if offers on Ethnic Fares is too high
Strength: Intimate Setting	Regular customers might be lost if they get families

Assessment	Potential Reward
Threat: Smokers will be lost as customers Because of anti-smokers regulation	Non-smoking customers might prefer our restaurants in smoking in prohibited

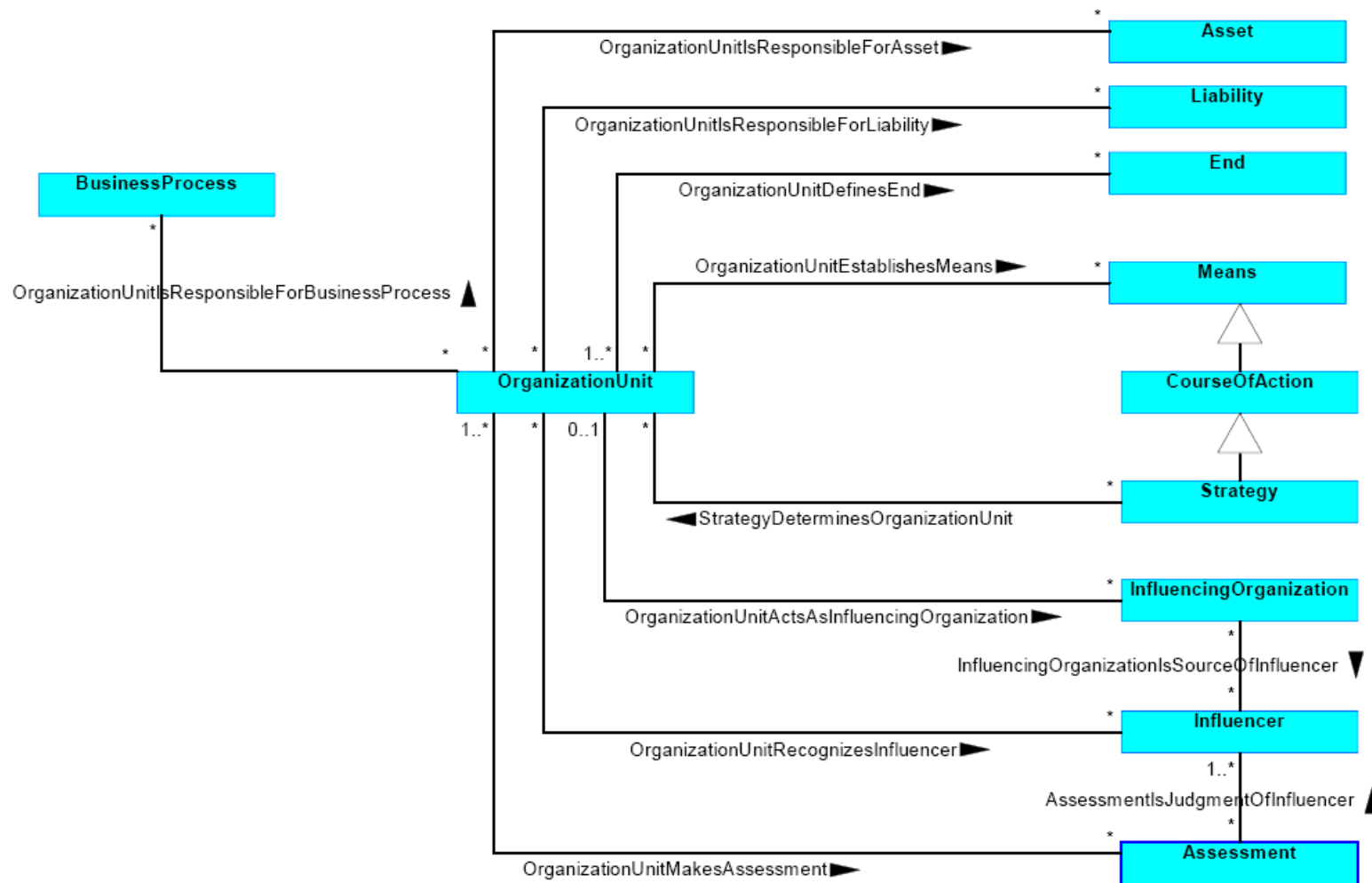
Placeholders

- Four concepts - Asset, Organization Unit, Business Process, and Business Rule - have roles in the structure of the Business Motivation Model but actually are defined in other standards,
 - ◆ Organization Structure Metamodel (OSM),
 - ◆ Business Process Definition Metamodel (BPDM), and
 - ◆ Semantics of Business Vocabulary and Business Rules (SBVR).
- Business Rule is a core concept of the BMM (albeit that its definition is adopted from SBVR).
- Organization Unit and Business Process are placeholders for association with concepts in OSM and BPDM respectively.

Organization Unit

- For each Business Process there should be a responsible party. These parties play key roles with respect to motivation.
- In BMM this is reflected by linking elements of the business process to Organization Units
- Logical connections: Organization Unit ...
 - ... is responsible for Assets
 - ... is responsible for Liabilities
 - ... defines Ends
 - ... establishes Means
 - ... acts as Influencing Organization
 - ... recognizes Influencers
 - ... makes Assessments
 - ... is defined by Strategies
 - ... is responsible for Business Processes

Connections of Organization Unit



Business Process

- A Business Process is

"A unit of work to accomplish a transformation of information or resources contributing to the business objective of a conventional or orchestrated process." [BPDM 'Activity']

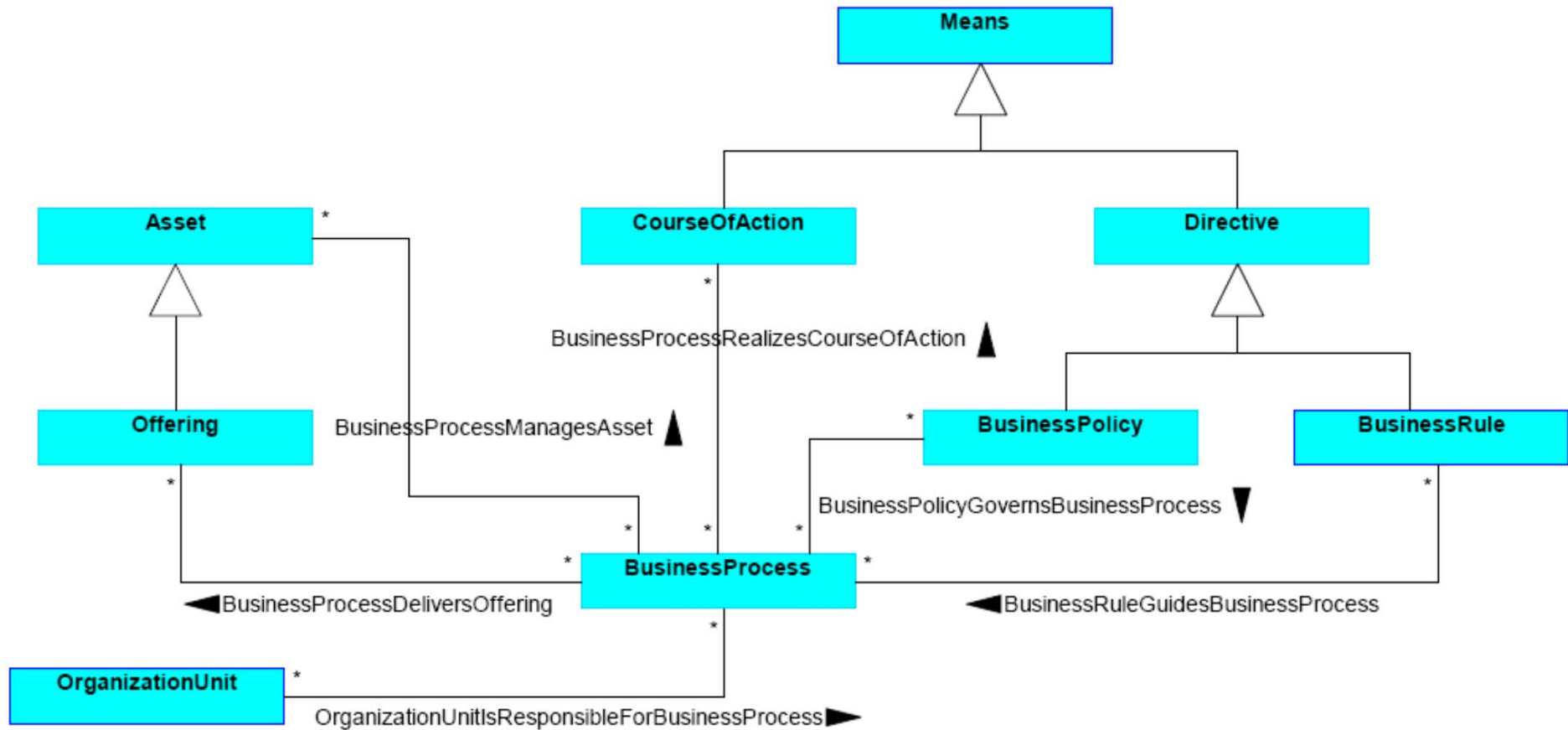
- Business Processes and Business Rules are closely related.

- ◆ Business Processes *realize* Courses of Action – they provide detail of activities, plus sequencing, control, and synchronization.
- ◆ Business Rules *guide* Business Processes – they provide the basis for decisions that need to be made within Business Processes.

- Business Processes *are governed by* Business Policies, which:

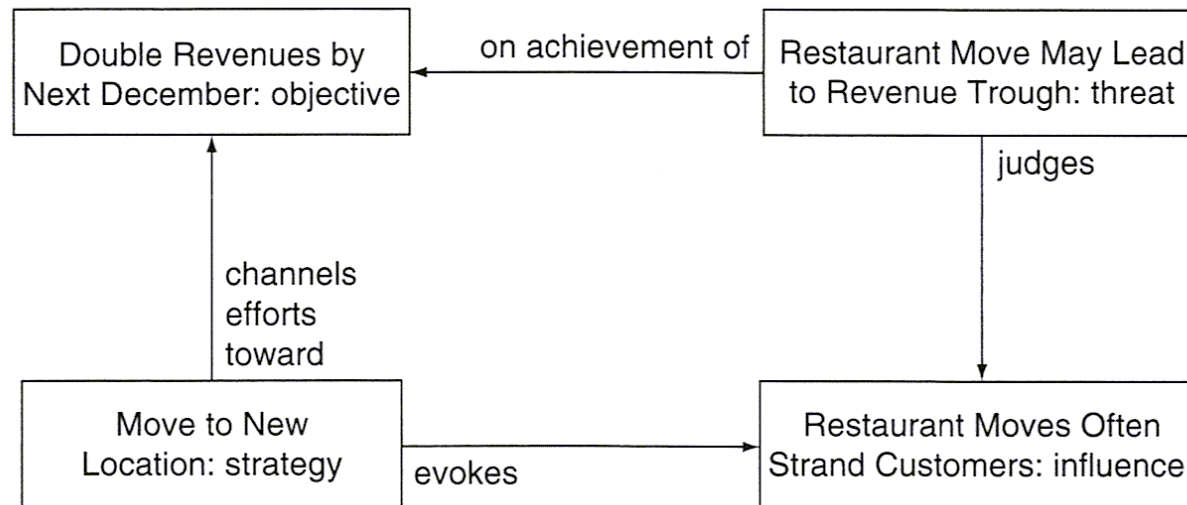
- ◆ Provide guidance (both directly and via Courses of Action) on what Business Processes have to do.
- ◆ Set limits on how Business Processes may undertake what they have to do.

Connections of Business Process

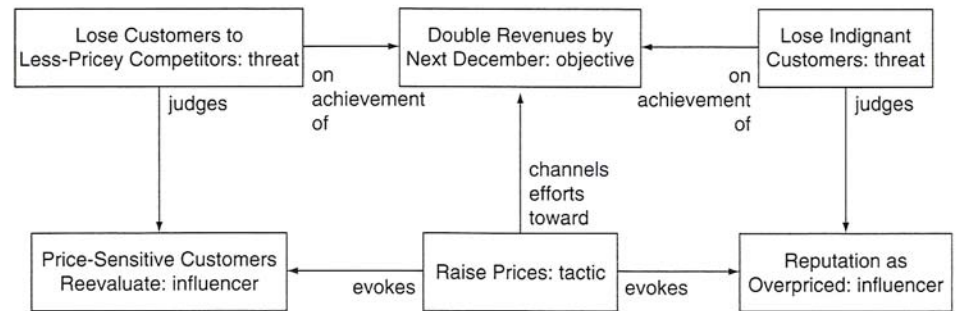
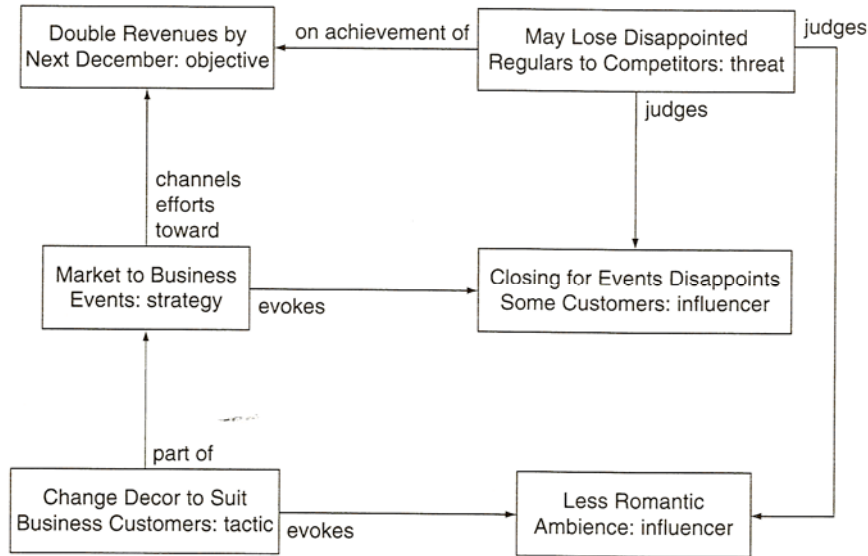


Comparing Alternatives

- Business Motivation Models can help in strategy creation by creating alternative models and then compare them
- Example: Management wants to increase Adalina's revenue
- Moving to a New Location would be a possible strategy:



Two Other Strategies for the same Objective



Three Alternative Strategies in one Diagram

