

Business Motivation Modelling

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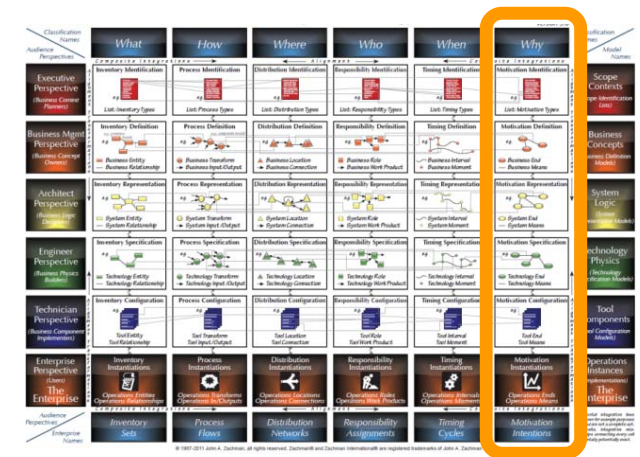


Literature

- David M. Bridgeland, Ron Zahavi (2009). *Business Modeling – A Practical Guide to Realizing Business Value, Chapter 3*. Morgan Kaufman Publishers/OMG Press.
- OMG (2010) Business Motivation Model, Version 1.1, <http://www.omg.org/spec/BMM/1.1/PDF> (referenced as (OMG-BMM 2010))

Motivation

- Enterprises do not - or should not - act randomly.
- **Motivation:** When an enterprise executes a business process or applies a business rule, it should be able to say **why**.
- Much of the motivation for what an enterprise does is based on people in the enterprise deciding what is best for it:
 - ◆ what are the **goals** and
 - ◆ what are the **strategies** to achieve them
- The enterprise should be able to say
 - ◆ who decided about the motivation, and
 - ◆ on what **assessments**
 - ◆ of what **influences**.



(OMG-BMM 2010, p. 10)

Business Motivation modeling makes the reasons for



Reaction on Change

- What an enterprise does is not driven by change but by how the enterprise decides to react to change. This requires
 - ◆ recognition of changes caused by *influencers*
 - ◆ *assessment* of their impact on the enterprise
- Business Motivation Model supports traceability:
 - ◆ Forward: from impact of influence to specification of business processes, business rules, and organization responsibilities.
 - ◆ Backward: show why an enterprise does what it does in the way it does it.
- Traceability is important for transformation projects: If we know the reasons for decisions, why can assess what can be changed and what should not be changed
 - not to change parts of the architecture which are essential
 - not to keep elements of the architecture that are not useful anymore
- In practice, businesses do not have complete traceability of motivation. But, when they choose to move towards it, the Business Motivation Model will support it.



A Story: Meditation

A guru held an evening meditation with his disciples daily. When the domestic cat one day ran into the meditation room and disturbed the meditation, he ordered, that the cat shall be bound outside during this time. So one could meditate undisturbed from there again. But the time passed. The guru died and got a successor. His successor observed strictly the tradition that during the evening meditation outside »a cat« must be tied up. When the cat finally died, too, a new cat was acquired to be able to be tied up during the evening meditation. With the time the evening meditation, however, completely came out of use itself; nobody was interested in it anymore. But with the greatest probability the rite of binding a cat in the evening was kept at least – There may be tradition similar to this one which have completely lost their original justification and thus their meaning.



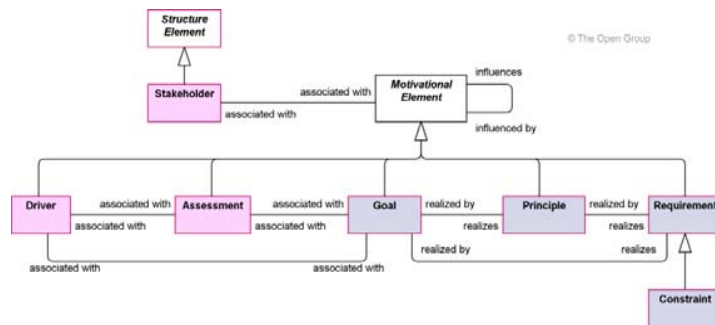
Translated from: Peter Knauer (2002). Handlungsnetze – Über das Grundprinzip der Ethik. Frankfurt

Business Motivation Modeling for Strategy and Business Transformation

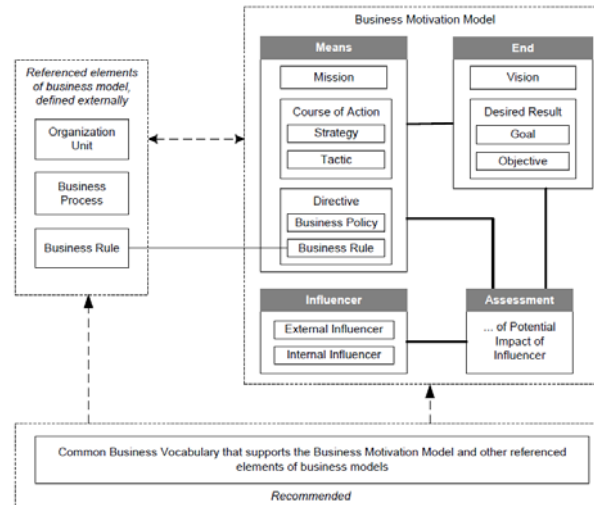
- Business Motivation Modeling can play a role in
 - ◆ creating a new strategy
 - ◆ business transformation projects
- Using a motivation model, alternative strategies can be analysed and the results can be compared objectively.
- Business transformation projects change specific sections of the enterprise architecture.
- Business Motivation modeling makes the reasons for decision explicit and supports consistency in decision making between different projects, e.g.
 - ◆ not changing elements that are essential for other projects
 - ◆ not keeping elements that are not needed anymore

Two Approaches for Business Motivation Modeling

■ ArchiMate Motivation Extension

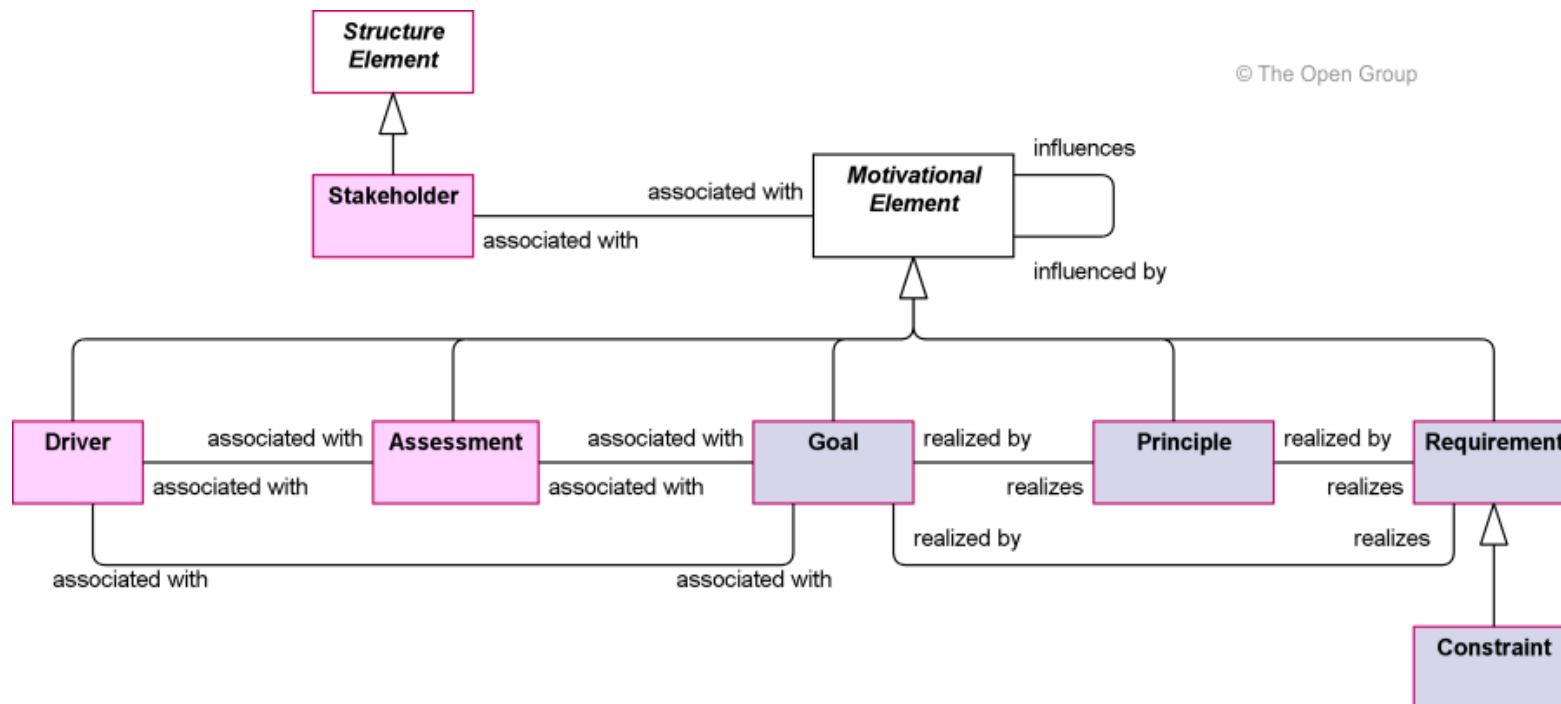


■ OMG Business Motivation Model



ArchiMate Motivation Extension

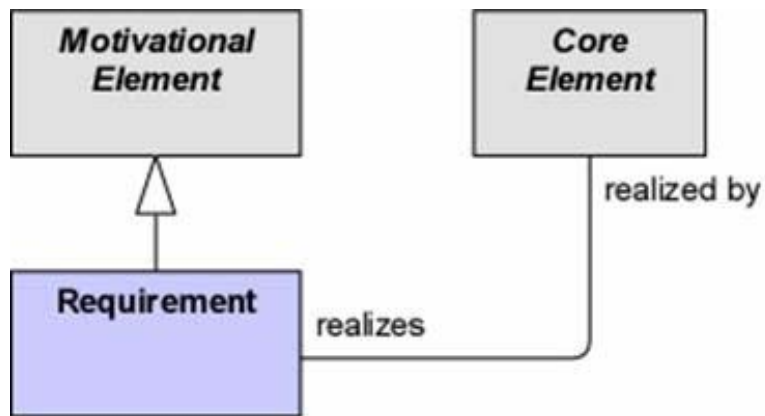
- The motivation extension adds motivational concepts such as goal, principle, and requirement. It corresponds to the “Why” column of the Zachman framework
- A **motivational element** provides the *context* or *reason* lying behind the architecture of an enterprise.



ArchiMate Motivation Extension (2)

- In addition, the Motivation extension recognizes the concepts of stakeholders, drivers, and assessments.
 - ◆ ***Stakeholders*** represent (groups of) persons or organizations that influence, guide, or constrain the enterprise.
 - ◆ ***Drivers*** represent internal or external factors which influence the plans and aims of an enterprise.
 - ◆ An understanding of assessments (***strengths, weaknesses, opportunities, and threats***) in relation to these drivers help the formation of plans and aims to appropriately address these issues.

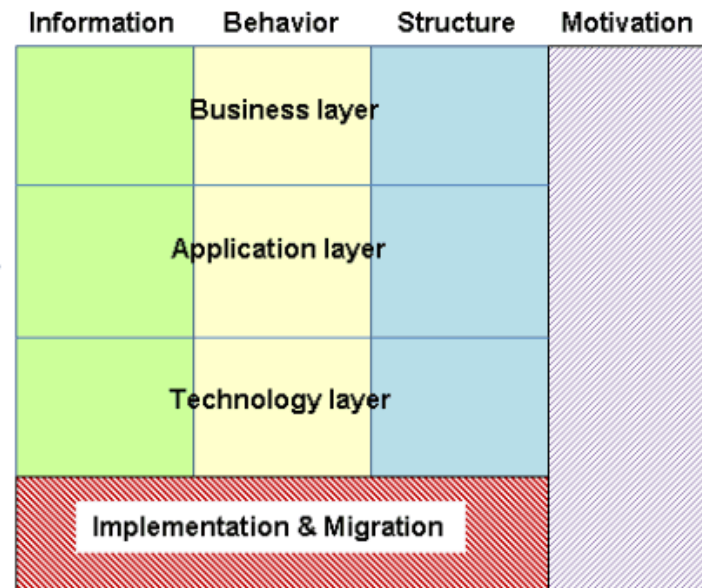
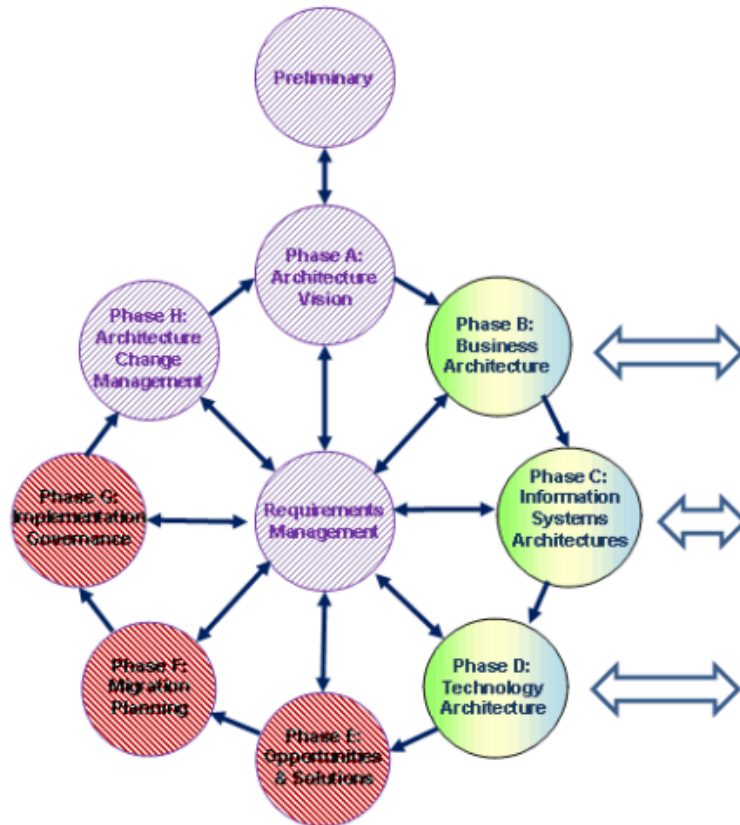
Relating Motivation Elements to Core Elements



- Core elements of an architectural description are related to motivational elements via requirements.
- Goals and principles have to be translated into requirements before core elements, such as services, processes, and applications, can be assigned that realize them.

ArchiMate Motivation Extension and TOGAF ADM

The main reason to introduce motivational concepts is to support requirements management and to support the Preliminary Phase and Phase A (Architecture Vision).

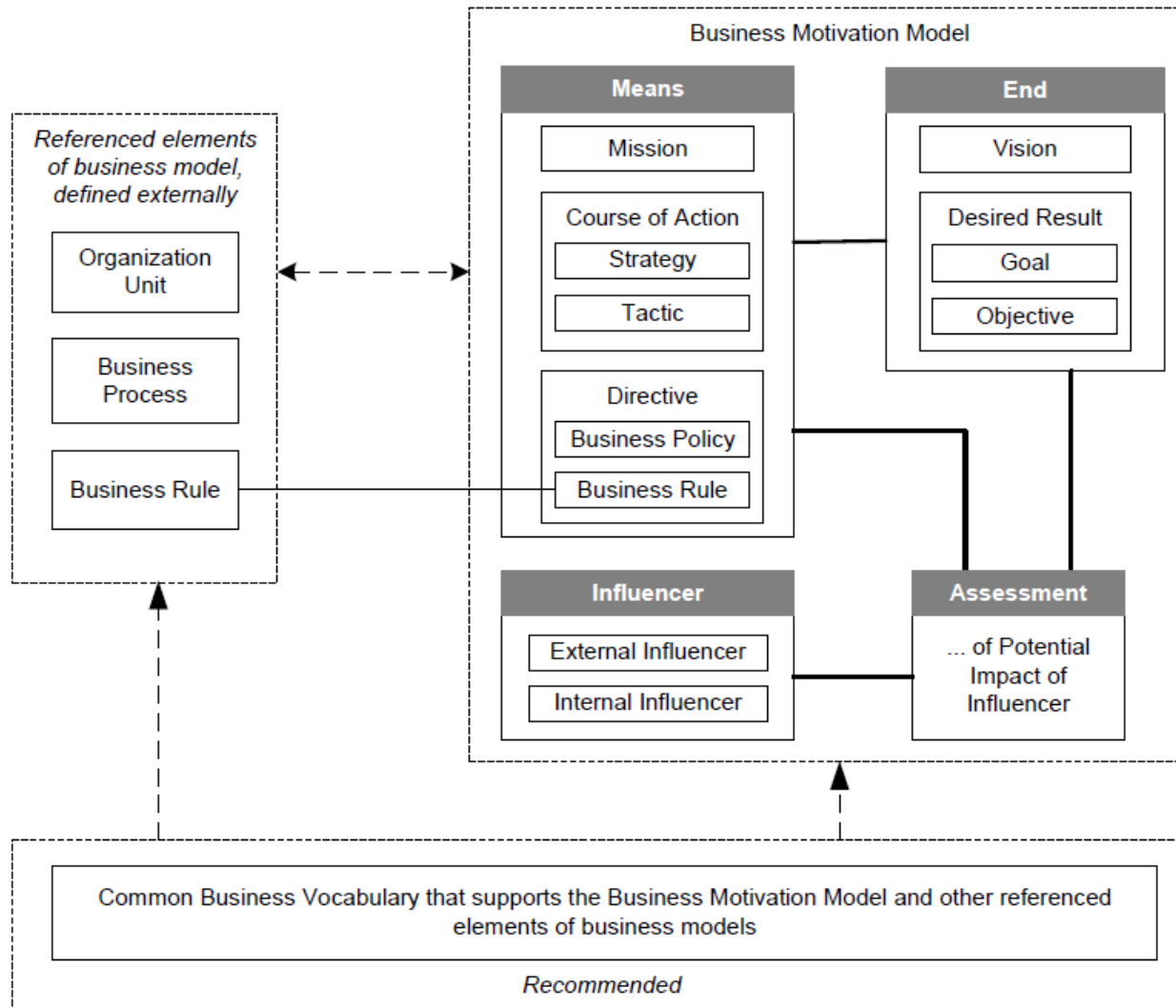


The Implementation and Migration extension adds concepts to support the late ADM phases: Phase E (Opportunities and Solutions), Phase F (Migration Planning), and Phase G (Implementation Governance).

OMG Business Motivation Model

- Business Motivation Model (BMM) is an OMG Specification (www.omg.org/spec/BMM/1.1/PDF). Purposes:
 - ◆ To capture decisions about reaction to change and the rationale for making them
 - ◆ 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.
 - ◆ In this chapter we use a graphical look for BMM diagrams created by (Bridgeland & Zahavi 2009) and model them using the Agilian BMM model type

Overview of the BMM Structure



BMM distinguishes between

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

(OMG-BMM 2010, p. 12)

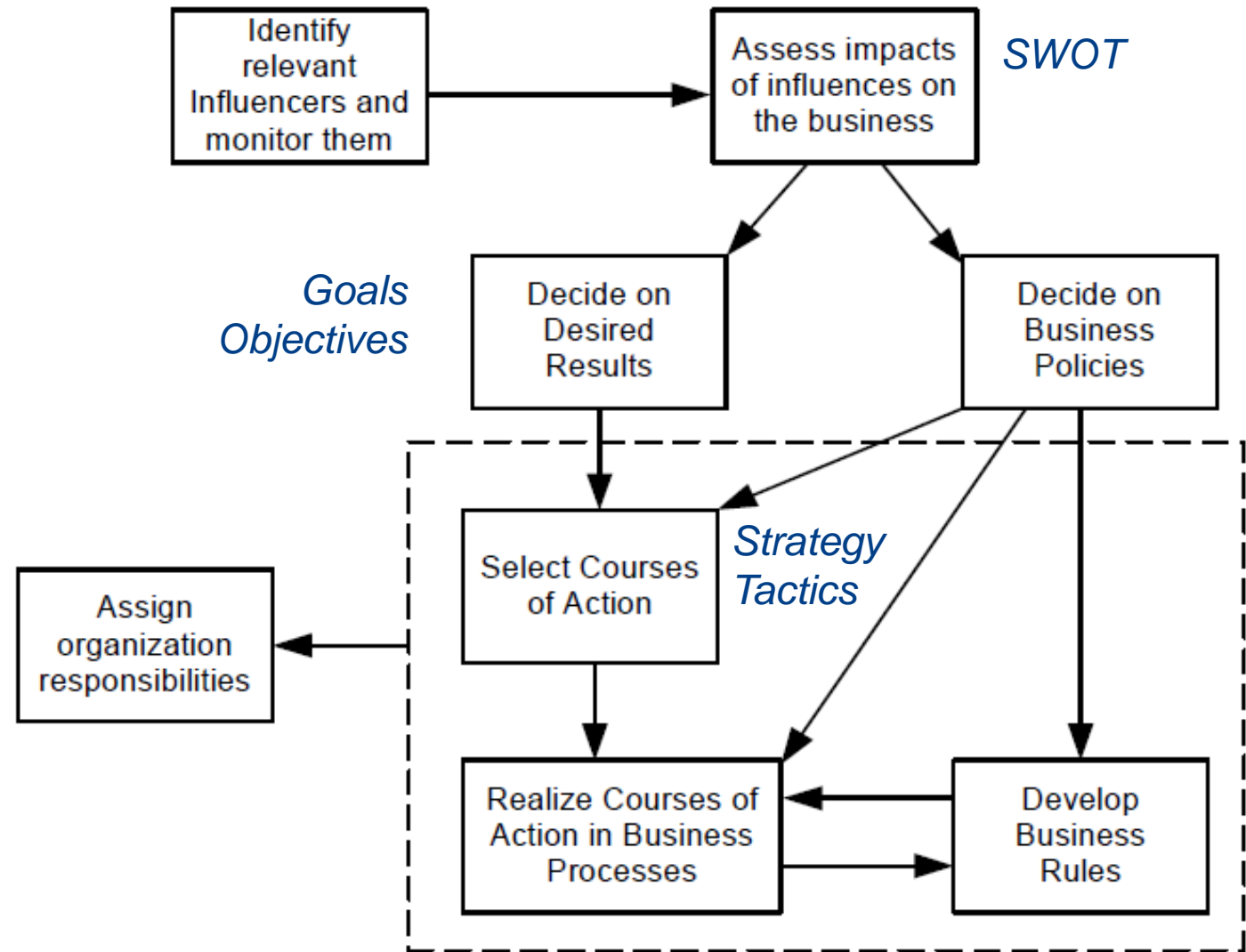


Overview of Business Motivation Modeling

- A cornerstone of any work addressing motivation has to be the
 - ◆ enterprise's aspirations (its **Vision**) – refined into **Goals** and **Objectives** – (called the *Ends*)
 - ◆ its action plans for how to realize them (its **Mission**) – refined into **Strategies** for approaching *Goals*, and **Tactics** for achieving *Objectives* (called the *Means*)
- An enterprise, however, cannot operate on this Model of ends and means alone. The business needs to take into account the numerous **Influencers** that can hinder or assist its operation.
 - ◆ Influencers can provide **Opportunities** that would help the enterprise operate, as well as **Threats** that would thwart it. Influencers also represent **Strengths** the enterprise could exploit, or **Weaknesses** that it should compensate for.
 - ◆ Whether Influencers are Strength, Weaknesses, Opportunities or Threats is determined by **Assessments**.
- Once an **Assessment** has identified relevant Influencers in terms of their impact on Ends and Means, Directives (**Business Policies** and **Business Rules**) can be put in place to govern and guide the enterprise Courses of Action. [\(OMG-BMM 2010, p. 9\)](#)



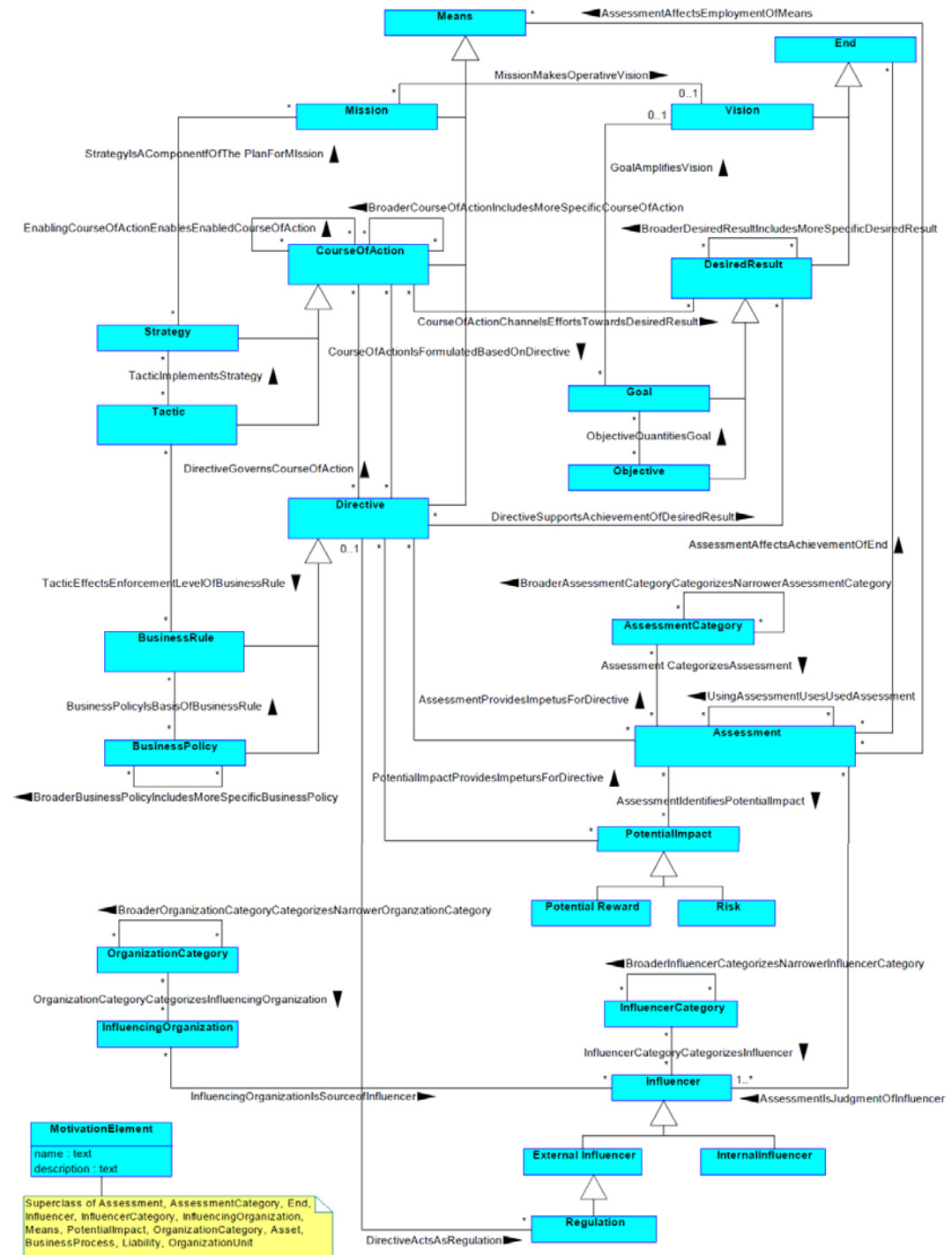
Logical Progression Through the Business Motivation Model



(OMG-BMM 2010, p. 17)



BMM Metamodel – Core Concepts



(OMG-BMM 2010, p. 18)

Superclass of Assessment, AssessmentCategory, End, Influencer, InfluencerCategory, InfluencingOrganization, Means, PotentialImpact, OrganizationCategory, Asset, BusinessProcess, Liability, OrganizationUnit

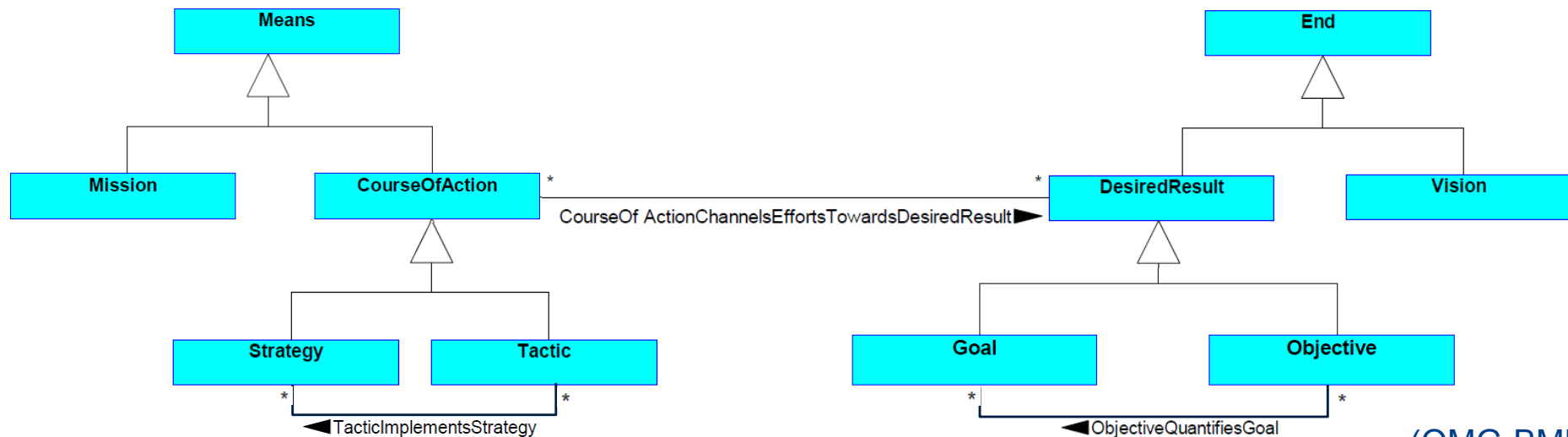


Ends and Means



Means - Ends

- The general term **End** was adopted to refer broadly to any of the ‘aspiration’ concepts (Vision, Goal, Objective)
- The term **Means** was adopted to refer generally to any of the ‘action plan’ concepts (Mission, Strategy, Tactic).
- This conjunction of Ends (‘being’) and Means (‘doing’) provides the core concepts of the Model
- Means can be changed without changing the ends; vice versa is, perhaps, not so common.



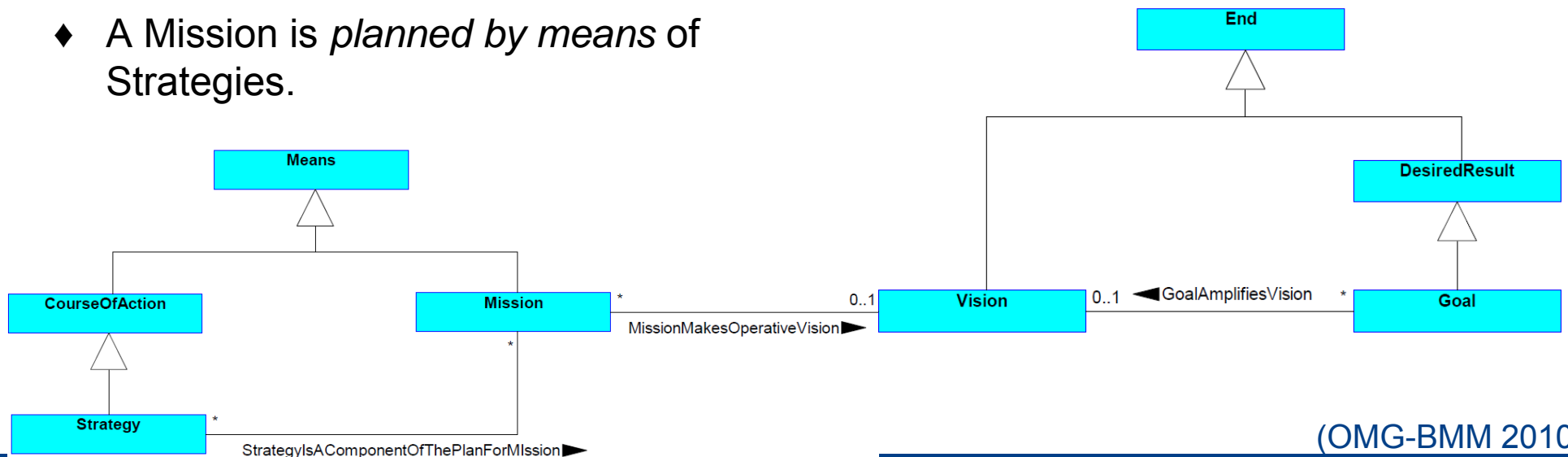
(OMG-BMM 2010)



Vision - Mission

- 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*.



(OMG-BMM 2010)



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:

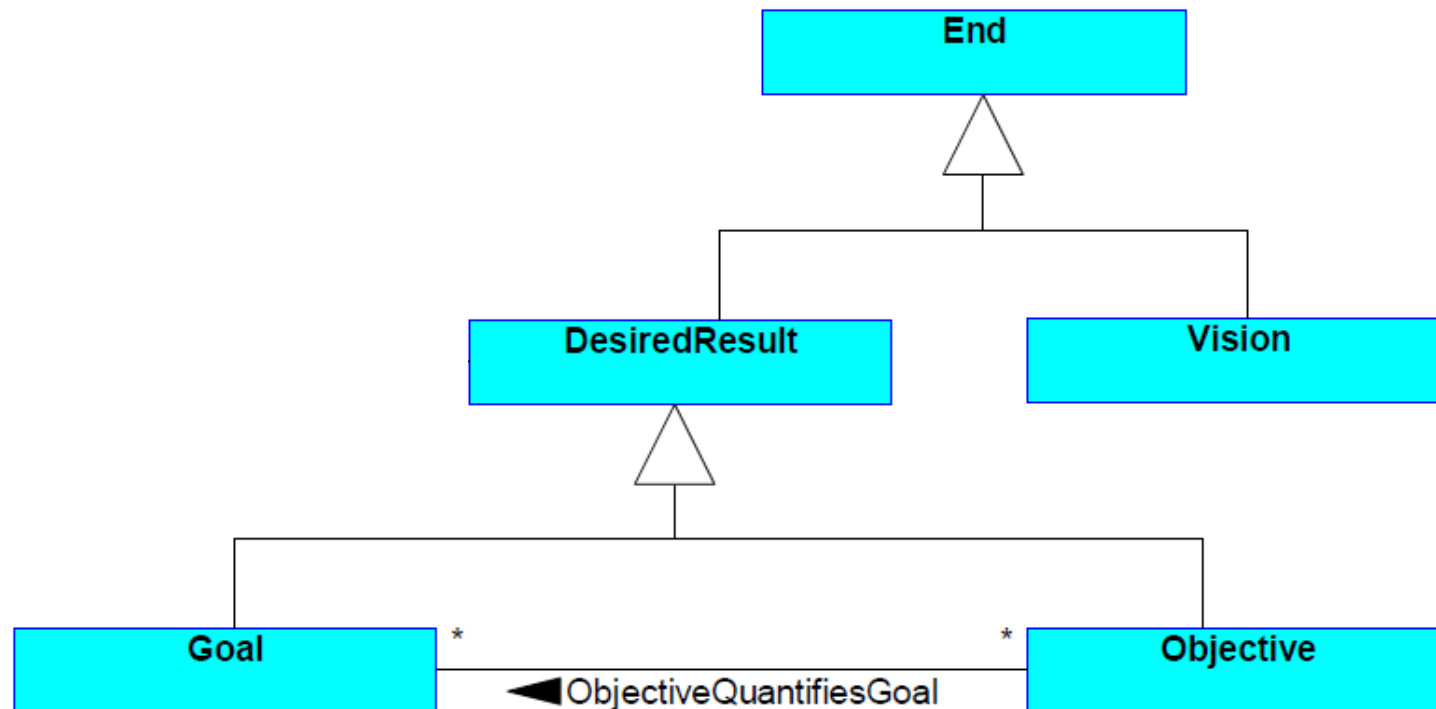
Enterprise	Mission
EU-Rent	Provide car rental service across Europe and North America for both business and personal customers.
Pizza Company	Provide pizza to customers city-wide.
Consulting Company	Provide consulting, outsourcing, and staff augmentation services to companies in North America.
Retail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

(OMG-BMM 2010)



Core Elements of the BMM: End

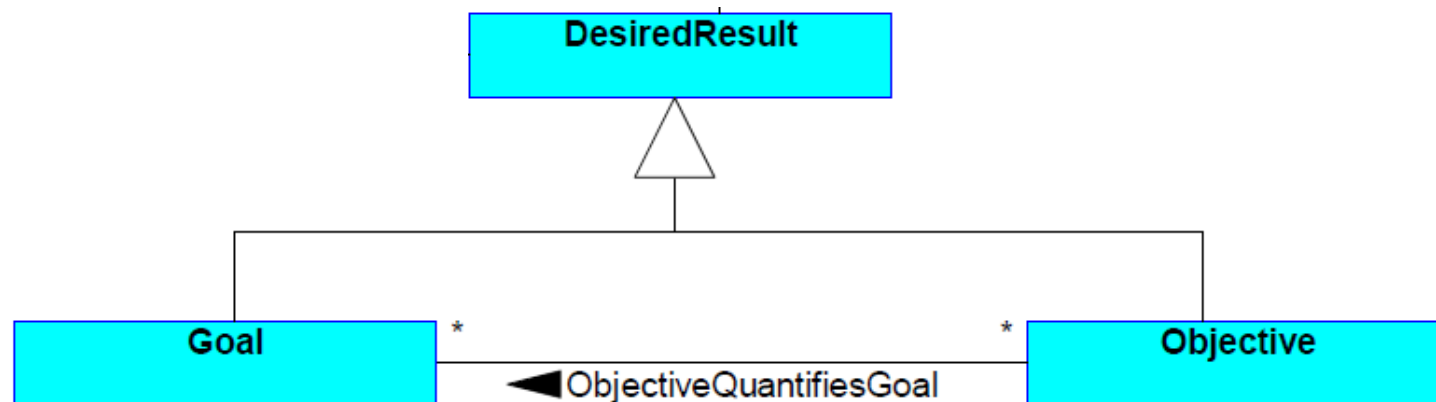
- An End is something the business seeks to accomplish
 - ◆ It does not include any indication of **how** it will be achieved.
 - ◆ Hierarchy of End Concepts:



(OMG-BMM 2010)

Desired Results: Goals and Objectives

- Desired Results come in two varieties
 - ◆ Goals
 - ◆ Objectives
- The difference between the two is that measurability
 - ◆ Objectives are measurable – in contrast to Goals



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)

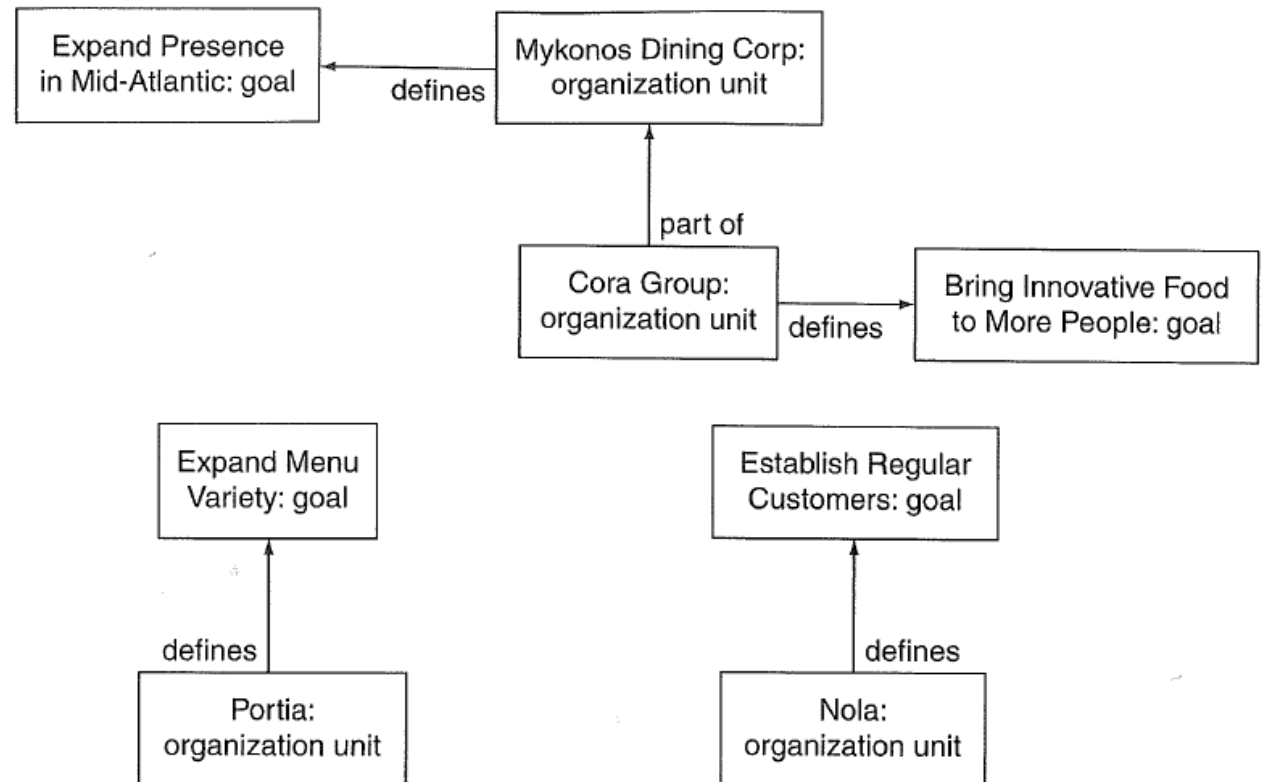
(Bridgeland & Zahavi 2009, p. 44)



Goals

- Motivation Modeling is about the achievement of goals.
- A goal is something an organization is trying to achieve **for its own sake** rather than as a means to some other end.

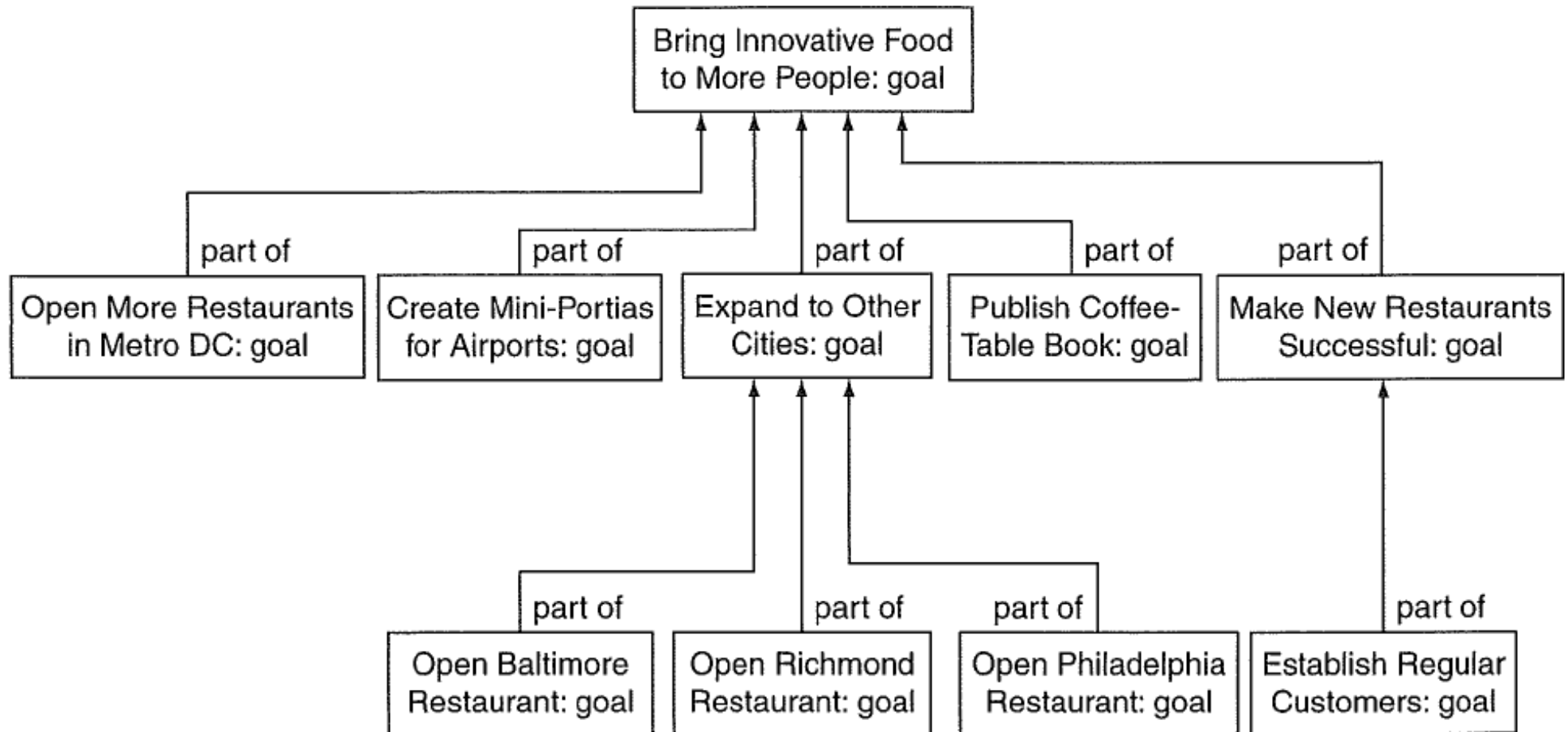
- A goal is defined by an organisation that is trying to achieve the goal



(Bridgeland & Zahavi 2009, p. 45)

Goal Hierarchies

- Larger Goals are often decomposed into subgoals



(Bridgeland & Zahavi 2009, p. 46)

Objectives

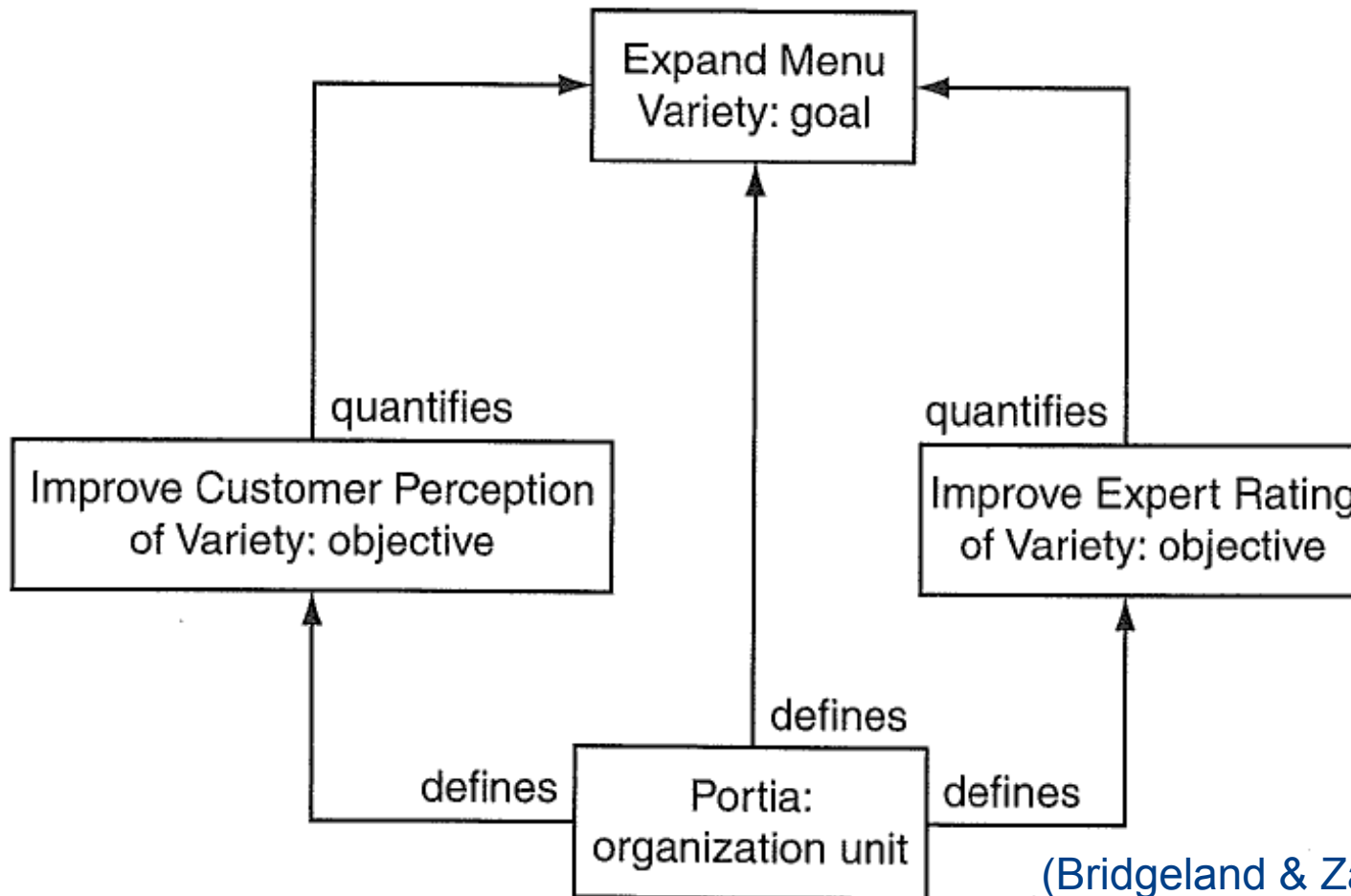
- Goals are complemented and quantified by Objectives:
- *Objectives are Desired Results* like *Goals*, but they are specific about both timing and measurement
- An Objective is an attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve a Goal
 - ◆ SMART: **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
 - by a timing – by end of the year

(Bridgeland & Zahavi 2009, p. 46f)



Objectives, Goals and Organisation

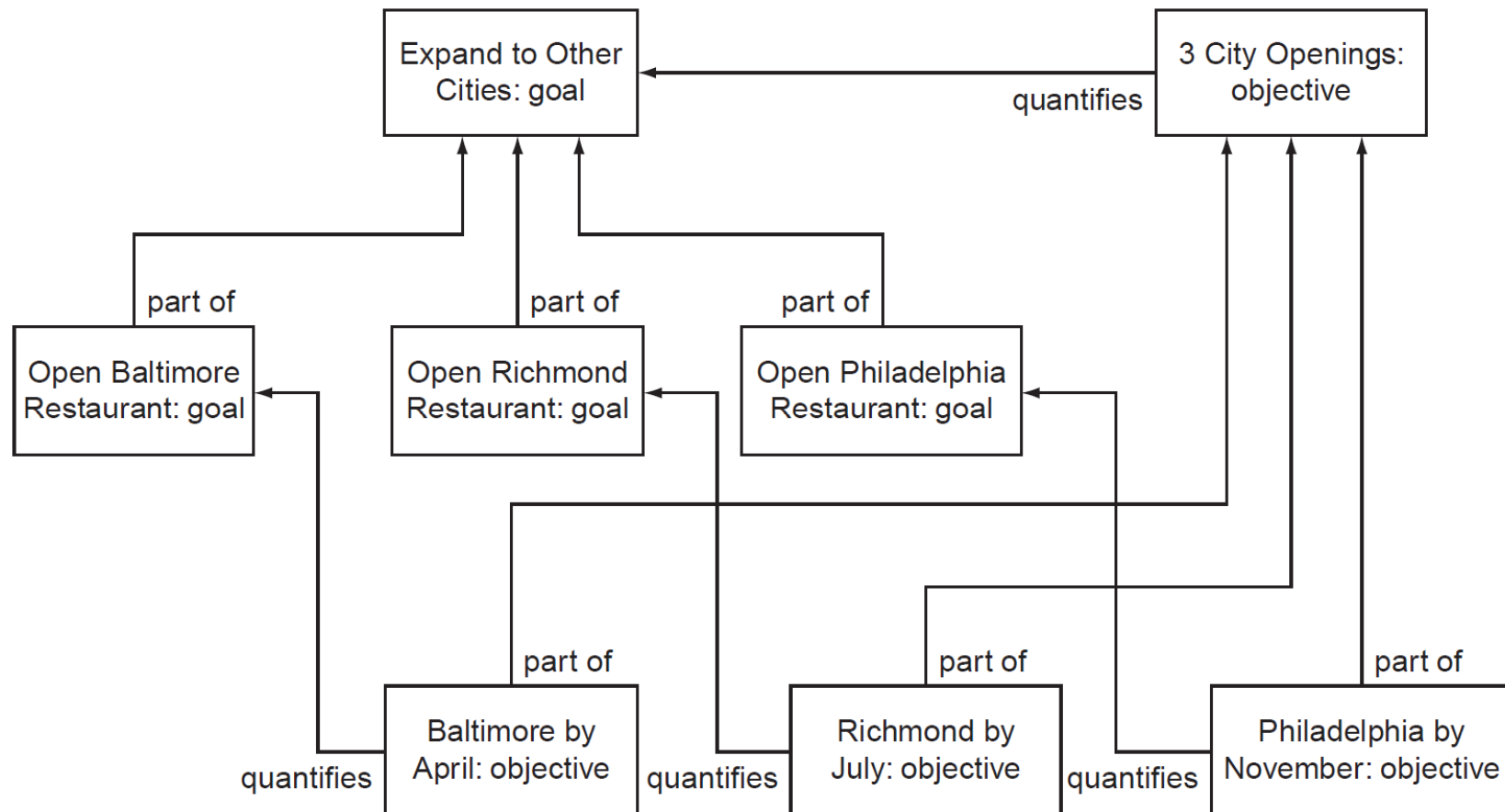
- Objectives – like goals – are defined by organisations.



(Bridgeland & Zahavi 2009, p. 48)

Hierarchies of Objectives and Goals

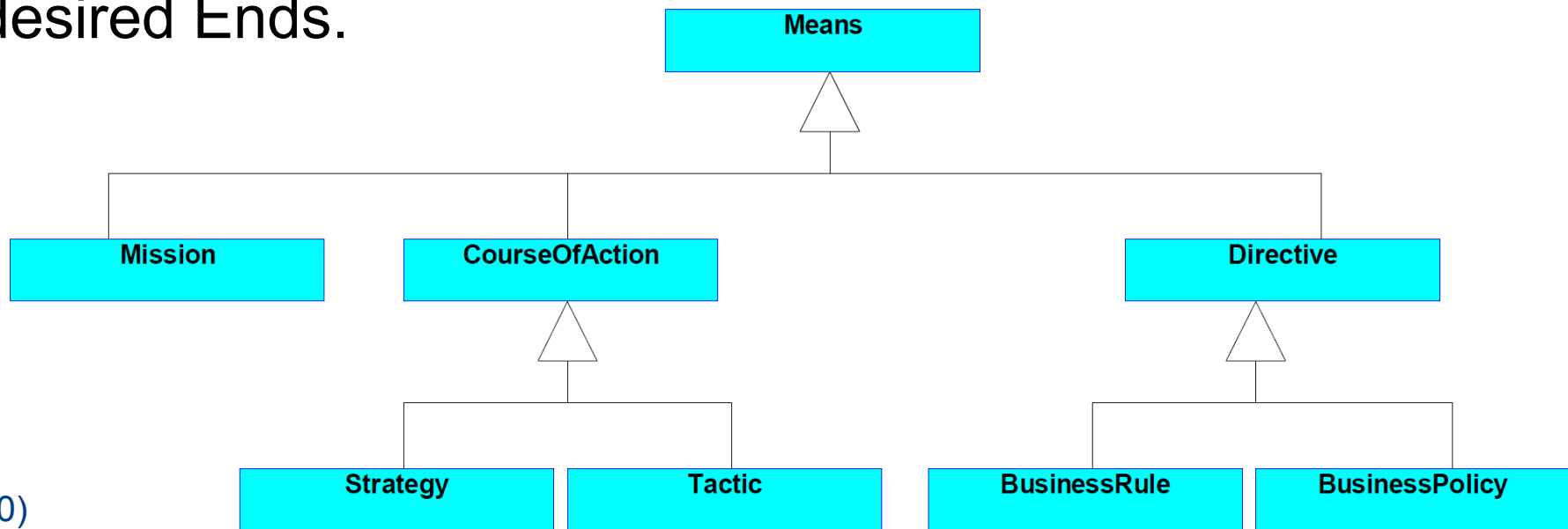
- Objectives – like goals – can be organized into a hierarchy



(Bridgeland & Zahavi 2009, p. 49)

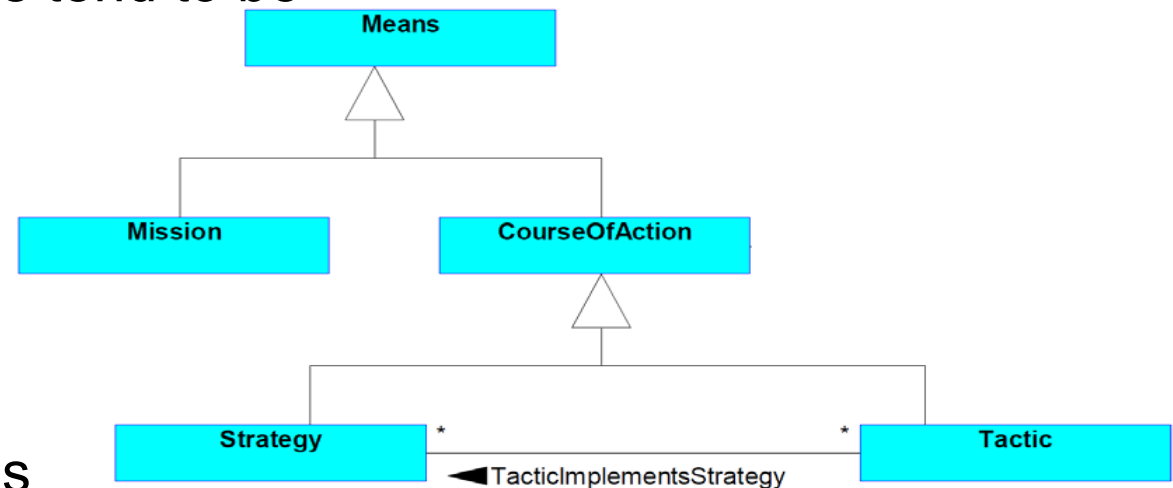
Core Elements of the BMM: Means

- 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

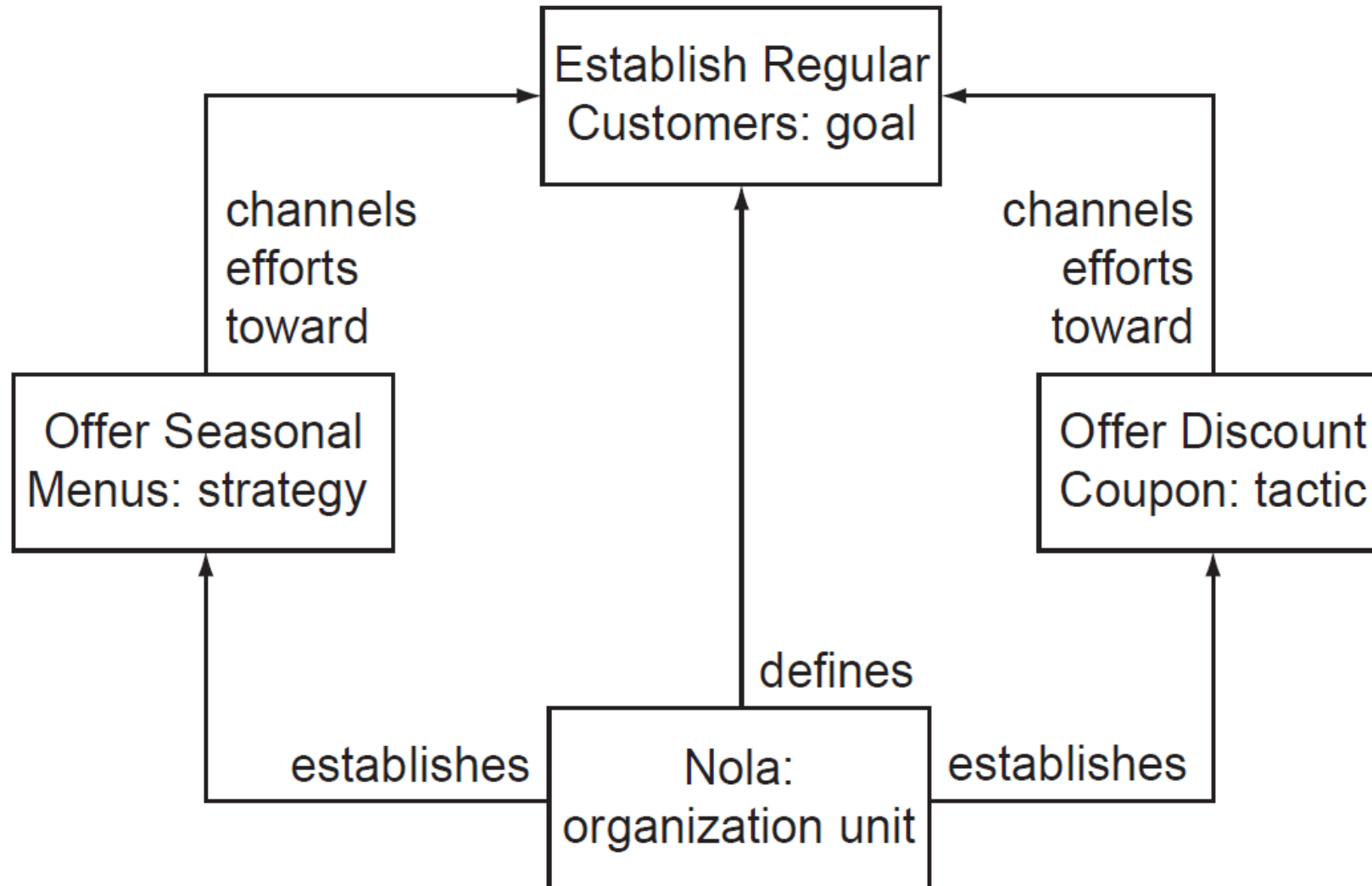
- Courses of action come in two varieties
 - ◆ strategies
 - ◆ tactics
- The difference between the two is a matter of size and commitment. Compared to tactics, strategies tend to be
 - ◆ longer term
 - ◆ broader in scope
 - ◆ harder to change



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

(OMG-BMM 2010)

Example: A strategy and a tactic

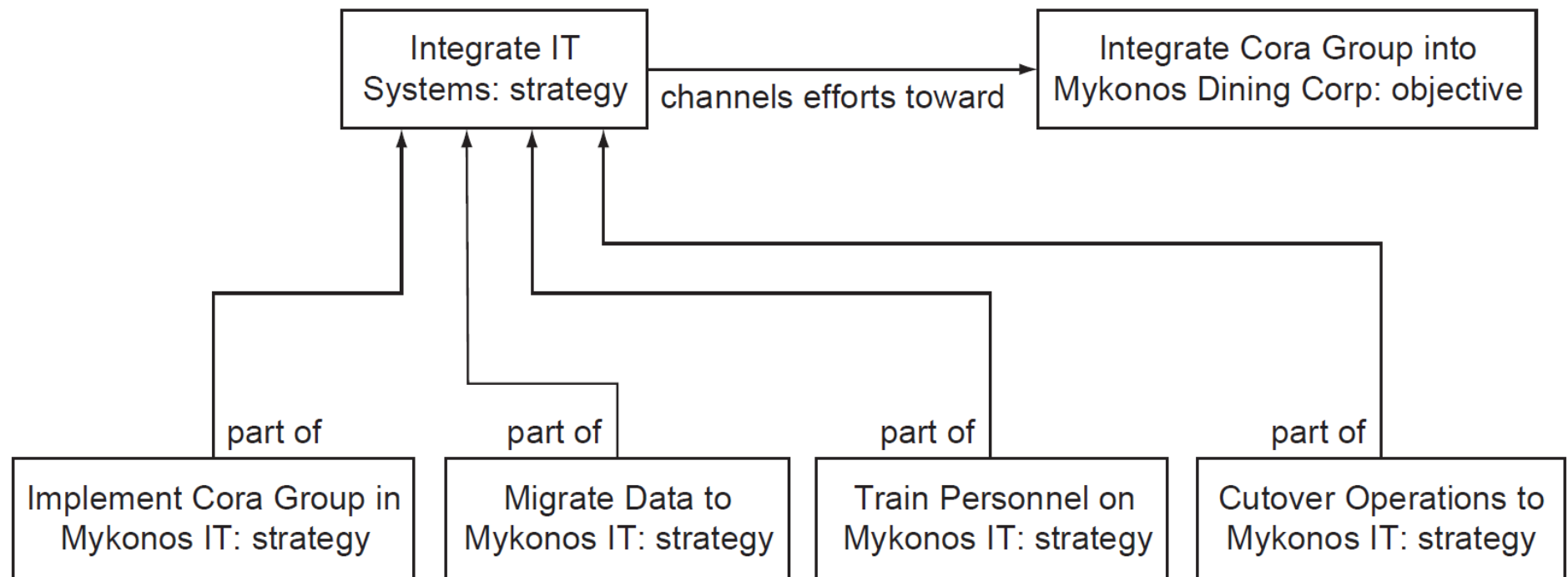


(Bridgeland & Zahavi 2009, p. 51)



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.

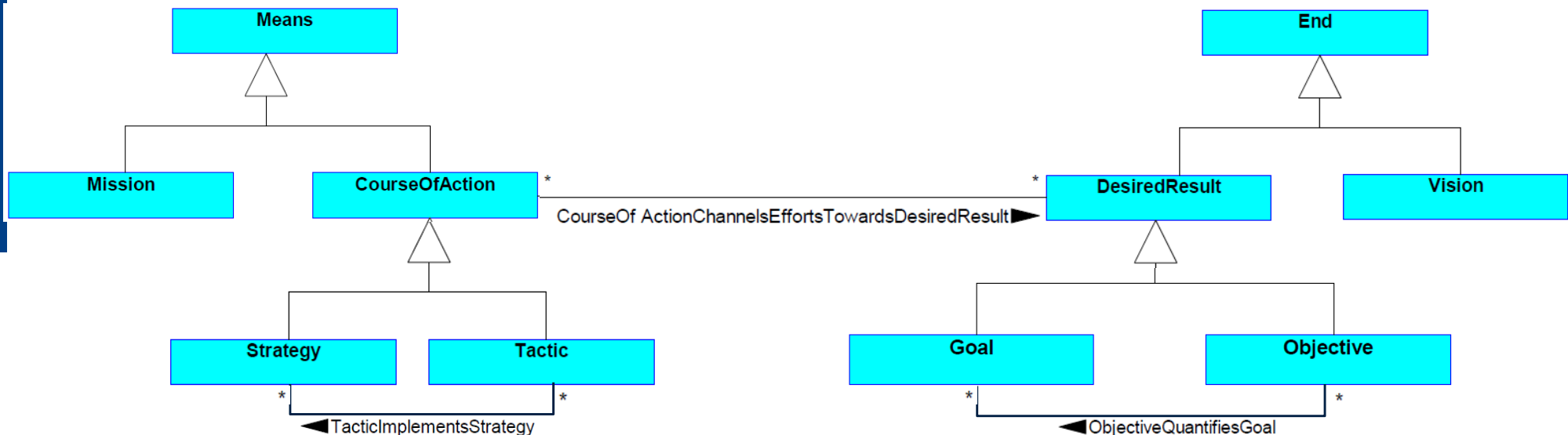


(Bridgeland & Zahavi 2009, p. 52)



Relations between Courses of Action and Desired Results

- Strategies and Tactics are means to achieve ends
 - ◆ A Strategy usually *channels efforts towards* Goals.
 - ◆ Tactics generally *channel efforts towards* Objectives.
- (This is not strict: A Tactic can also channel efforts towards goals)



(OMG-BMM 2010)



Desired Results and Courses of Action

- Both *Courses of Action* and *Desired Results* are things the organization is trying to accomplish. But they have different
 - ◆ A *Desired Result* (*Goal* or *Objective*) is something an organization is trying to do **for its own sake** – often based on some assessment (SWOT)
 - ◆ *Courses of Action* (*Strategies* and *Tactics*) are means to achieve some **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

(Bridgeland & Zahavi 2009, p. 49f)



Desired Results and Courses of Action - Example

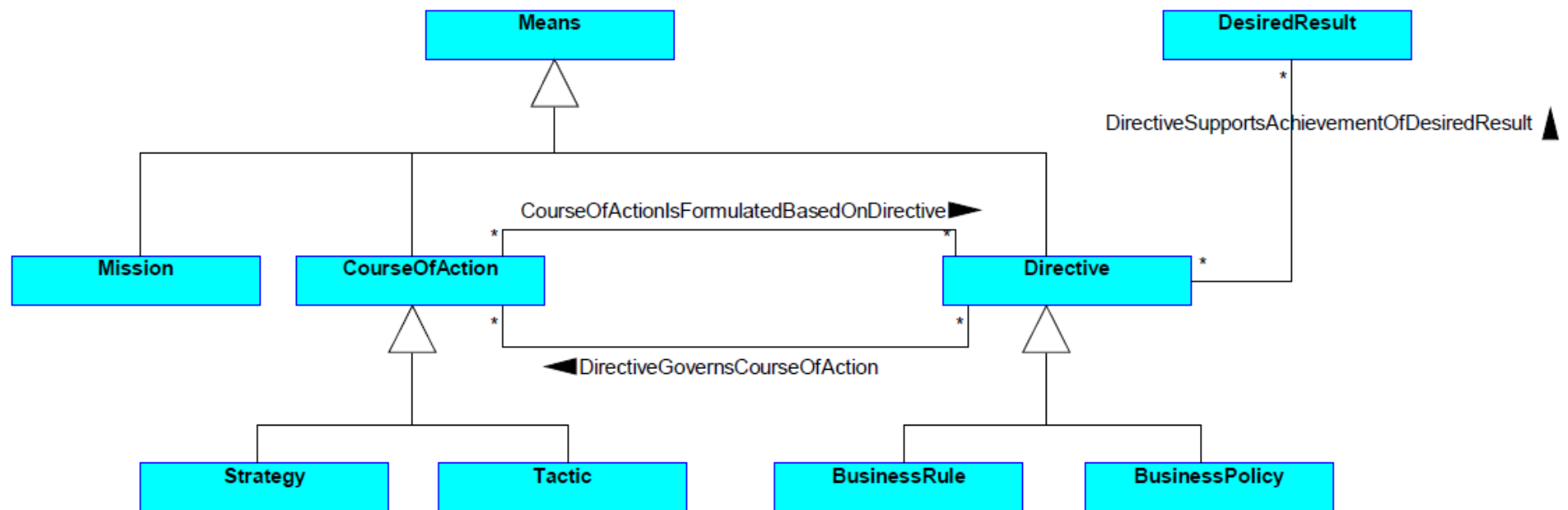
- Assume that a restaurant adds two goat dishes to the menu
 - ◆ If the head chef does this because he always wanted to serve goat, then **Add Goat Dishes** is a desired result
 - ◆ If he added the goat dishes in an effort to have some new newspaper articles then **Add Goat Dishes** is a course of action 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

(Bridgeland & Zahavi 2009, p. 50)



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.

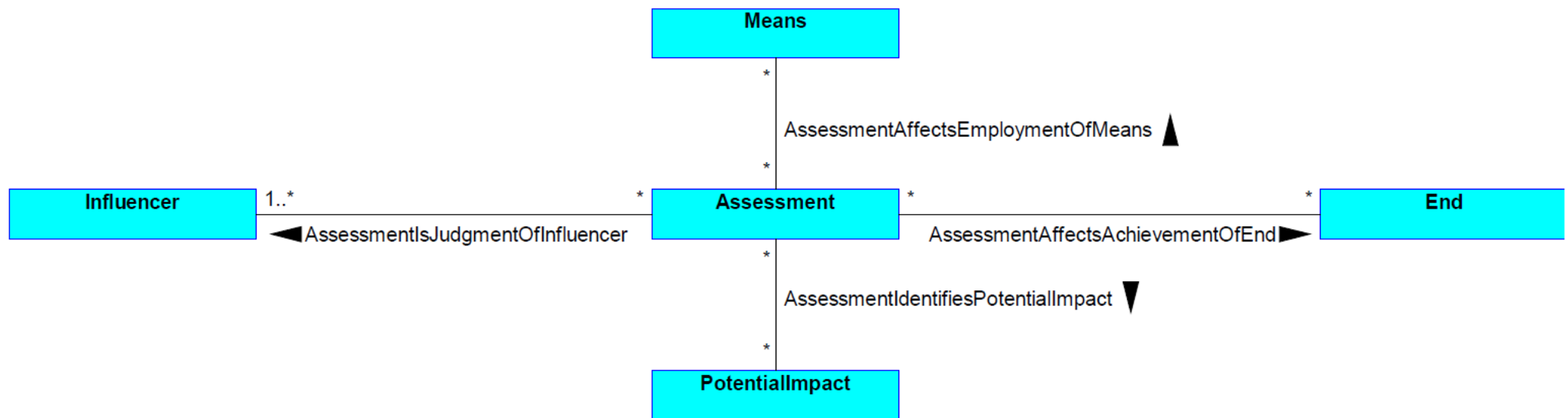


Influencers and Assessments



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.

(Bridgeland & Zahavi 2009, p. 52f)



Examples of Influencers for Cora Group

Influencers

A Fast-food Restaurant has opened close to Portia Restaurant

Innovative Restaurant Shortage in Western Suburbs

New Anti-smoking Regulation

Cora has to expand its business year on year

Managers are generally promoted from within the company

New waiters receive two days introductory training. Further training is informal, on the job.

Small Space

Closing for Events Disappoints some customers

Influencer Categories

- There are different Categories of Influencers, broad ones are
 - ◆ Internal Influencers
 - ◆ External Influencers
- These Categories can be detailed further
 - ◆ External Influencers:
 - Competitor
 - Customer
 - Environment
 - Technology
 - Regulation
 - ◆ Internal Influencers:
 - Assumption
 - Corporate Value:
 - Habit
 - Infrastructure

(OMG-BMM 2010)



Examples of External Influencers for Cora Group and their Categories

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

Examples of Internal Influencers for Cora Group and their Categories

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



Assessment

- An *Assessment* is an evaluation of an influencer's potential effect on business
- Varieties of Assessments
 - ◆ *Opportunity*: An external influencer that is judged to be favorable
 - ◆ *Threat*: An external influencer that is judged as unfavorable
 - ◆ *Strength*: A positive assessment of an internal influencer
 - ◆ *Weakness*: A negative assessment of an internal influencer
- Strength, Weaknesses, Opportunities and Threads could be determined by a SWOT analysis

	Internal	External
Positive	Strength	Opportunity
Negative	Weakness	Threat

(Bridgeland & Zahavi 2009, p. 57f)

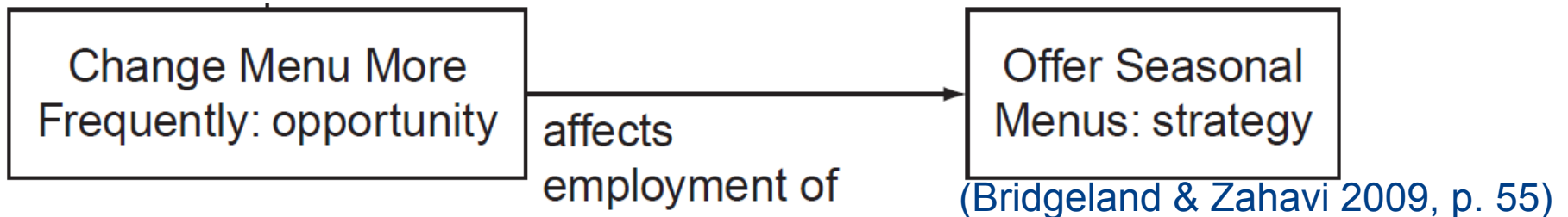
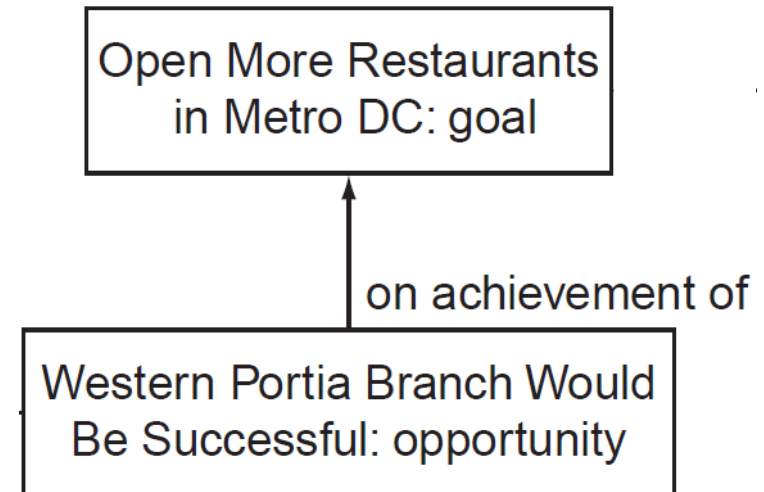


Assessments affect Goals and Strategies

- An *Assessment* can directly have an effect *on the achievement* of a *Goal* in order to

- ◆ benefit from strengths
- ◆ compensate weaknesses
- ◆ seize opportunities
- ◆ cope with threats

- An *Assessment* can also *affect the employment* of a *Strategy*



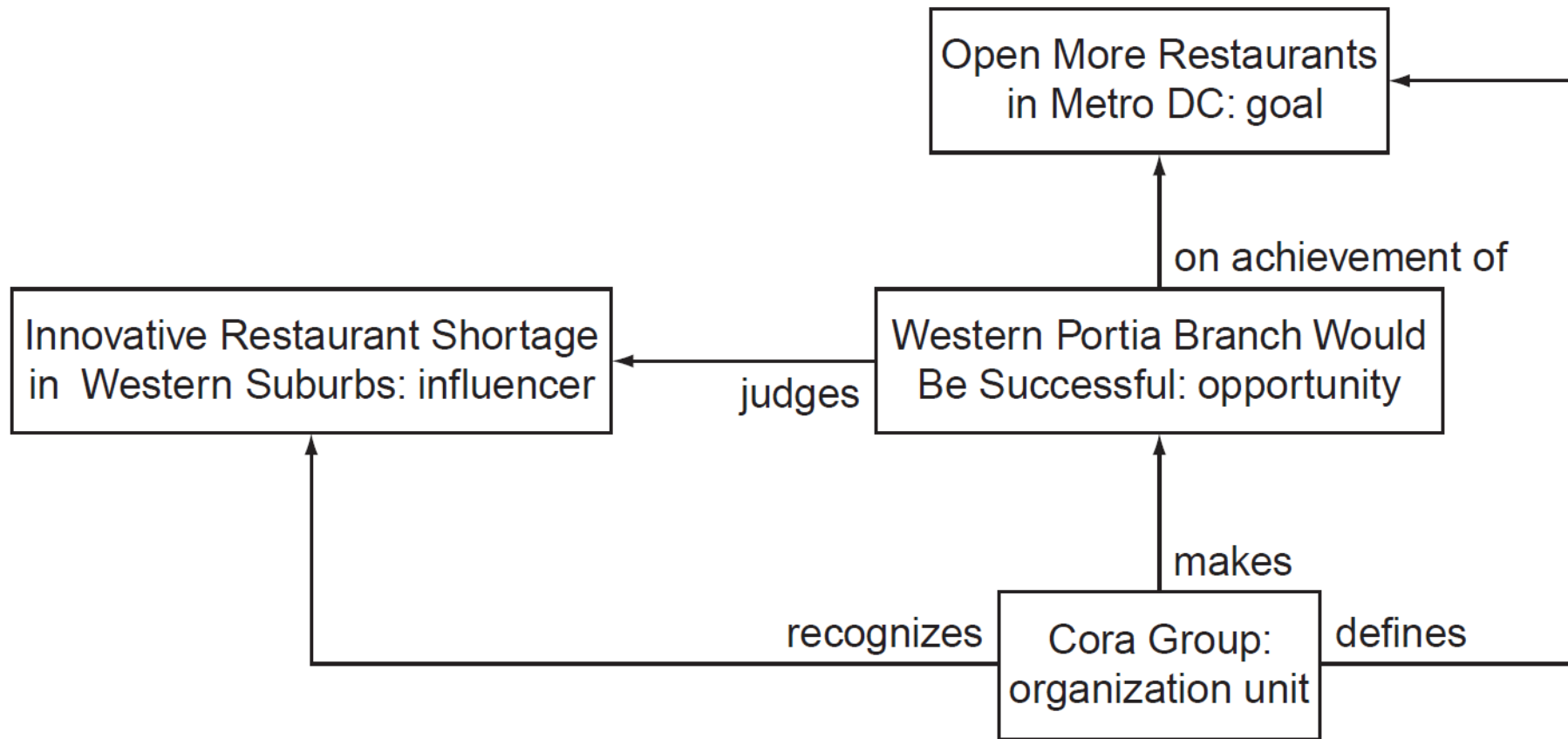
Opportunities

- 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**

(Bridgeland & Zahavi 2009, p. 53)



Example: An Influencer, an Opportunity and a Goal

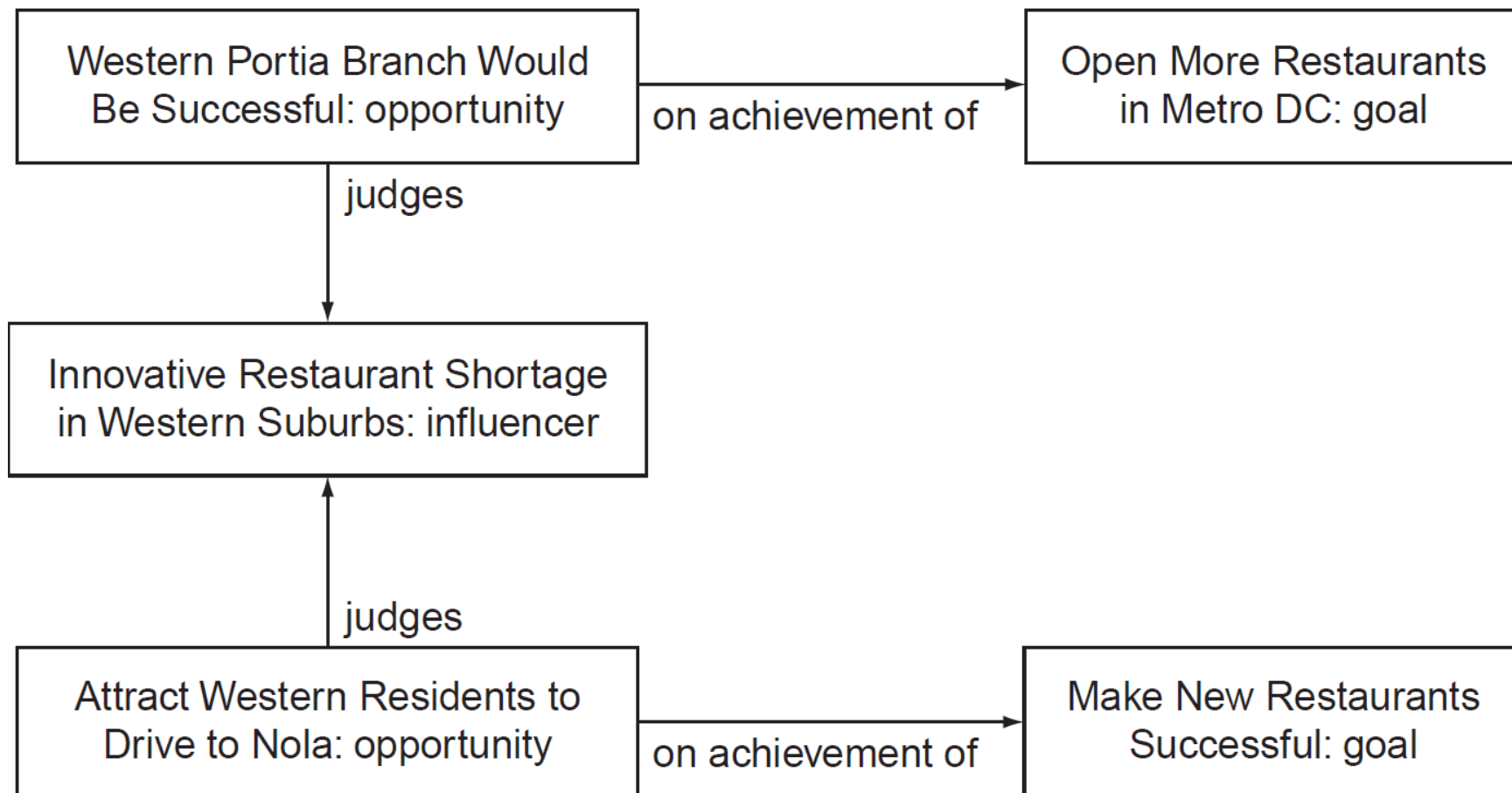


It is important to indicate which person or group of people makes which Assessment of an Influencer at which point in time, so that an audit trail exists for future reference. In the above example the judgement is made by the Cora Group organisational unit

(Bridgeland & Zahavi 2009, p. 54)

Example: An Influencer and Two Opportunities

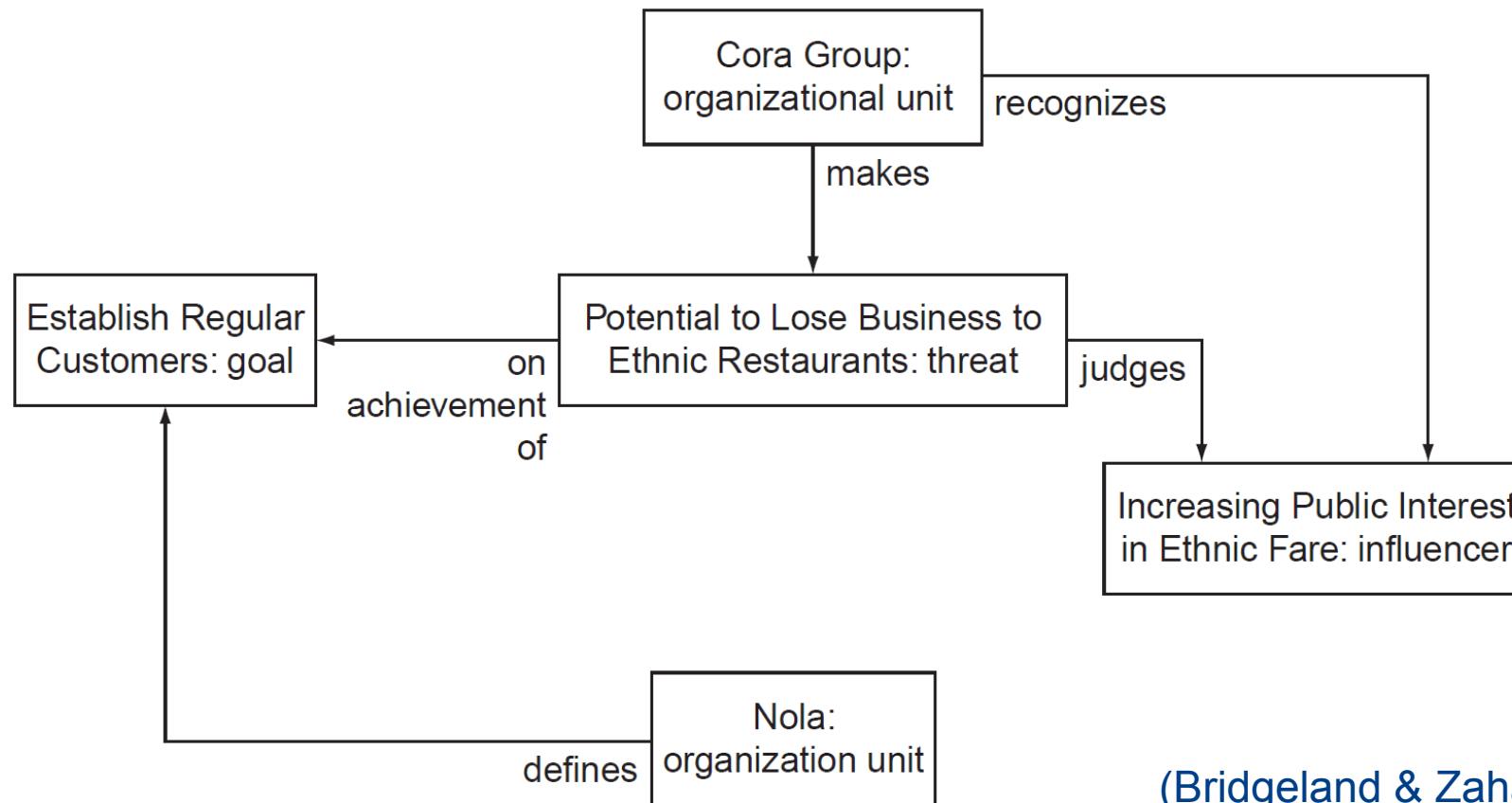
Sometimes a single influencer can help achieve more than one goal and so it is judged to be more than one opportunity



(Bridgeland & Zahavi 2009, p. 55)

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

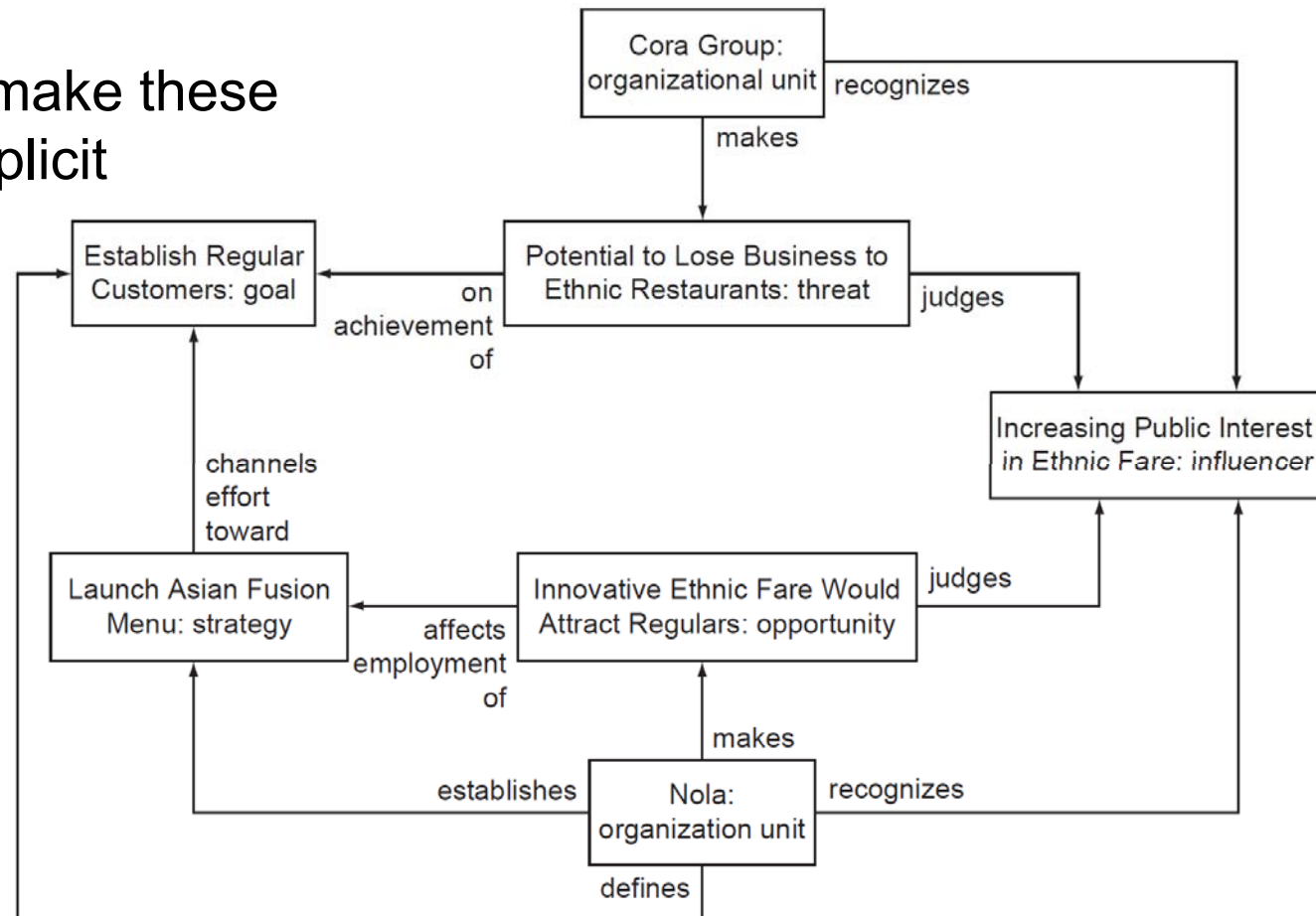


(Bridgeland & Zahavi 2009, p. 56)



Different Assessments of the same Influencer

- 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.
- A motivation model can make these differences of opinion explicit
- Example: an external influencer assessed as both positive(opportunity) and negative (thread)

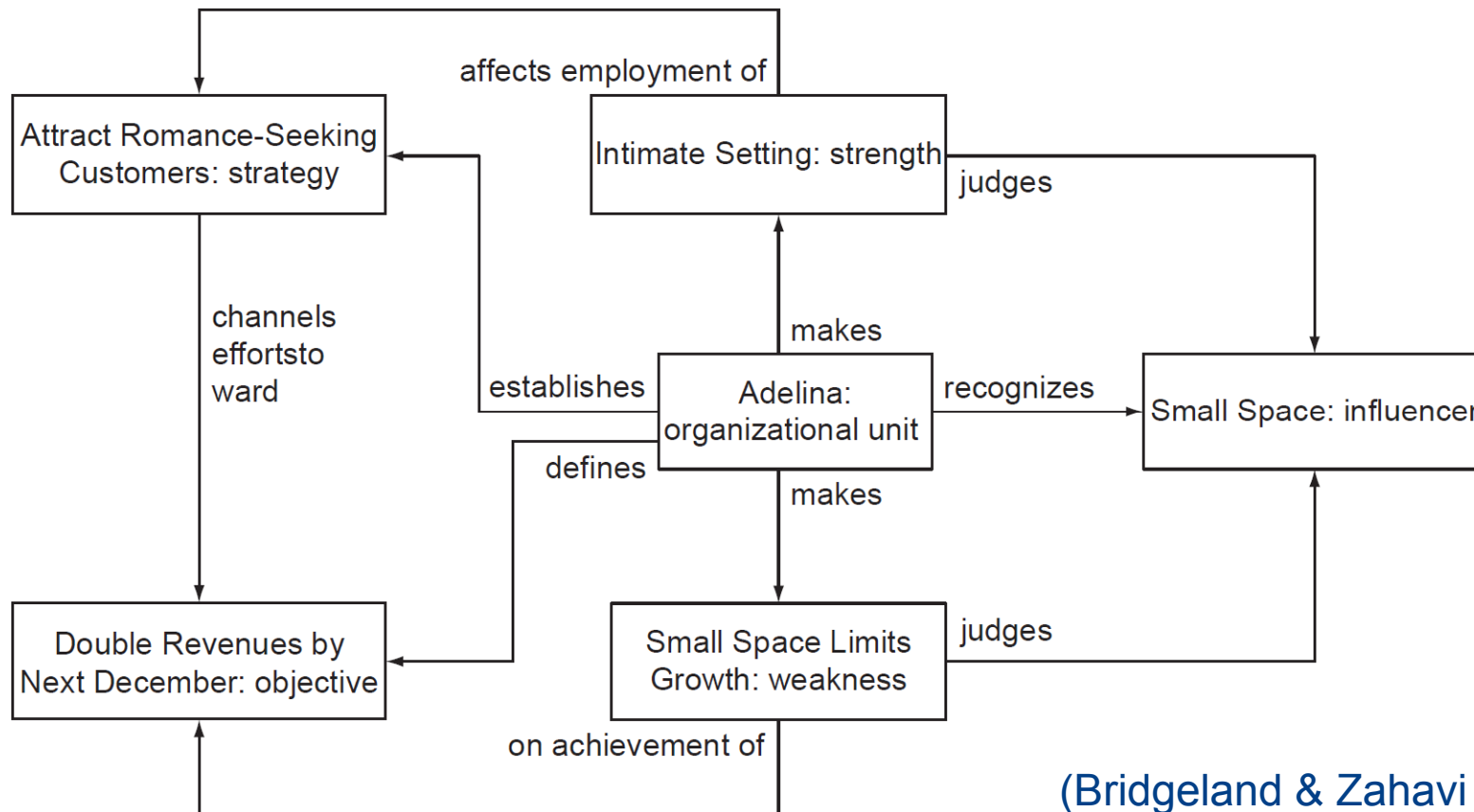


(Bridgeland & Zahavi 2009, p. 57)



Strengths and Weaknesses

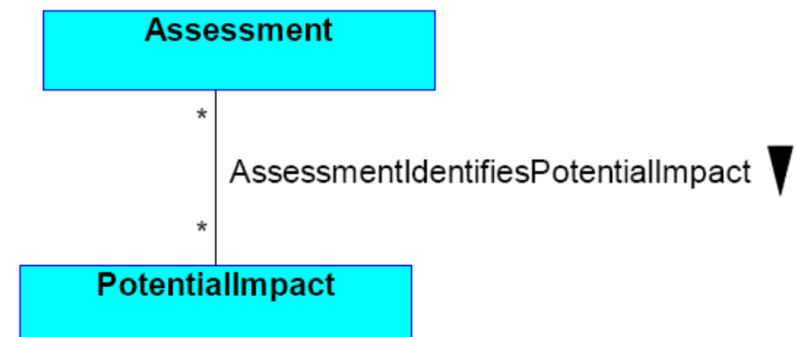
- Internal influencers can be judged as
 - ◆ strength if it helps the organisation to achieve its goals and strategies
 - ◆ weakness, if it inhibits the organization from such achievement



(Bridgeland & Zahavi 2009, p. 59)

Potential Impact

- An Assessment records judgements about the impact (or potential for impact) of some Influencer on Ends and/or Means.
- An Assessment can
 - ◆ directly affect the achievement of an end or the employment of means
 - ◆ indirectly provide impetus on a Directive by identifying some Potential Impact that *is significant to* that Assessment.
- Potential Impacts are categorized as
 - ◆ Risk: negative impact indicating probability of loss
 - ◆ Potential Reward: positive impact indicating the probability of gain



Examples of Risks and Potential Reward

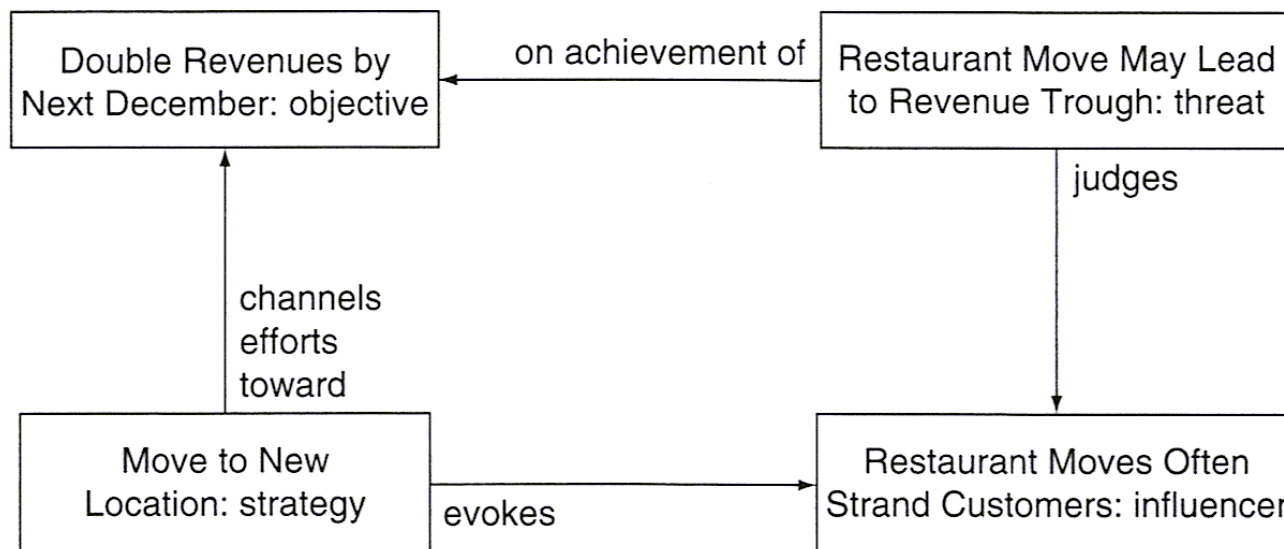
Assessment	Risk
Opportunity: Innovative Ethnic Fare would attract regulars	Friends of American food might look for alternative restaurants if offers on Ethnic Fares is too high
Strength: Intimate Setting	Regular customers might be lost if they get families

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



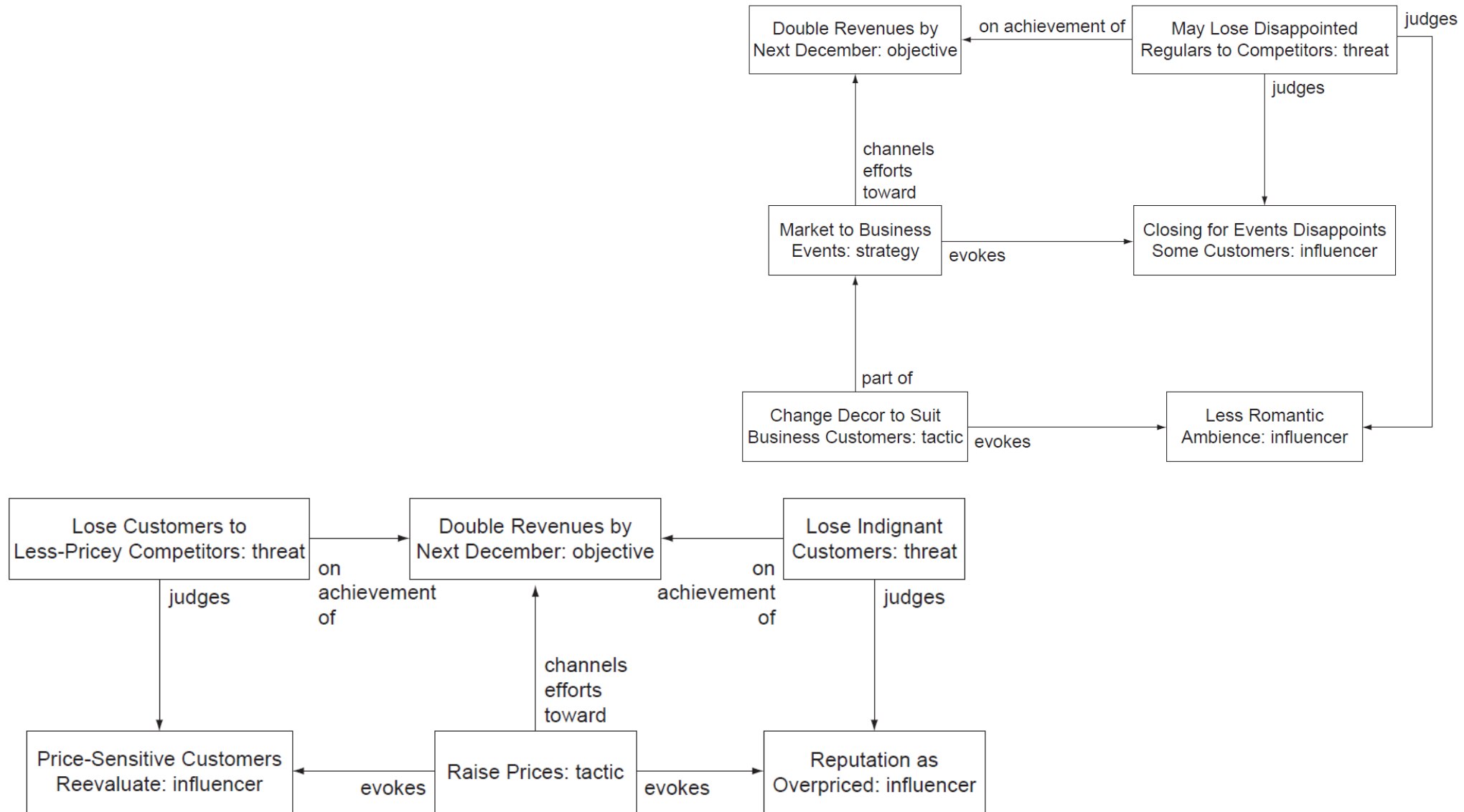
Comparing Alternatives

- 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



(Bridgeland & Zahavi 2009, p. 60)

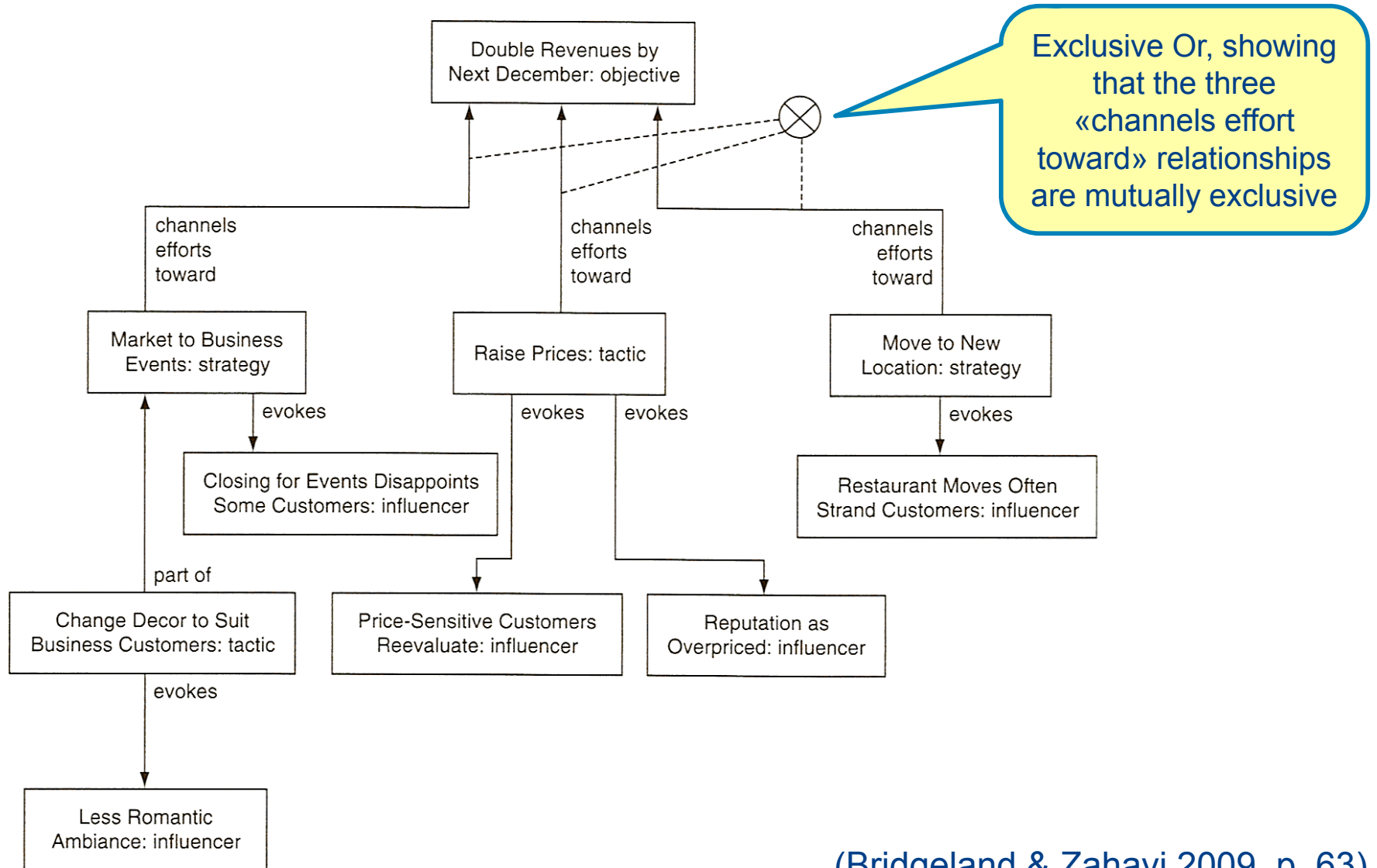
Two Other Strategies for the same Objective



(Bridgeland & Zahavi 2009, p. 61f)



Three Alternative Strategies in one Diagram



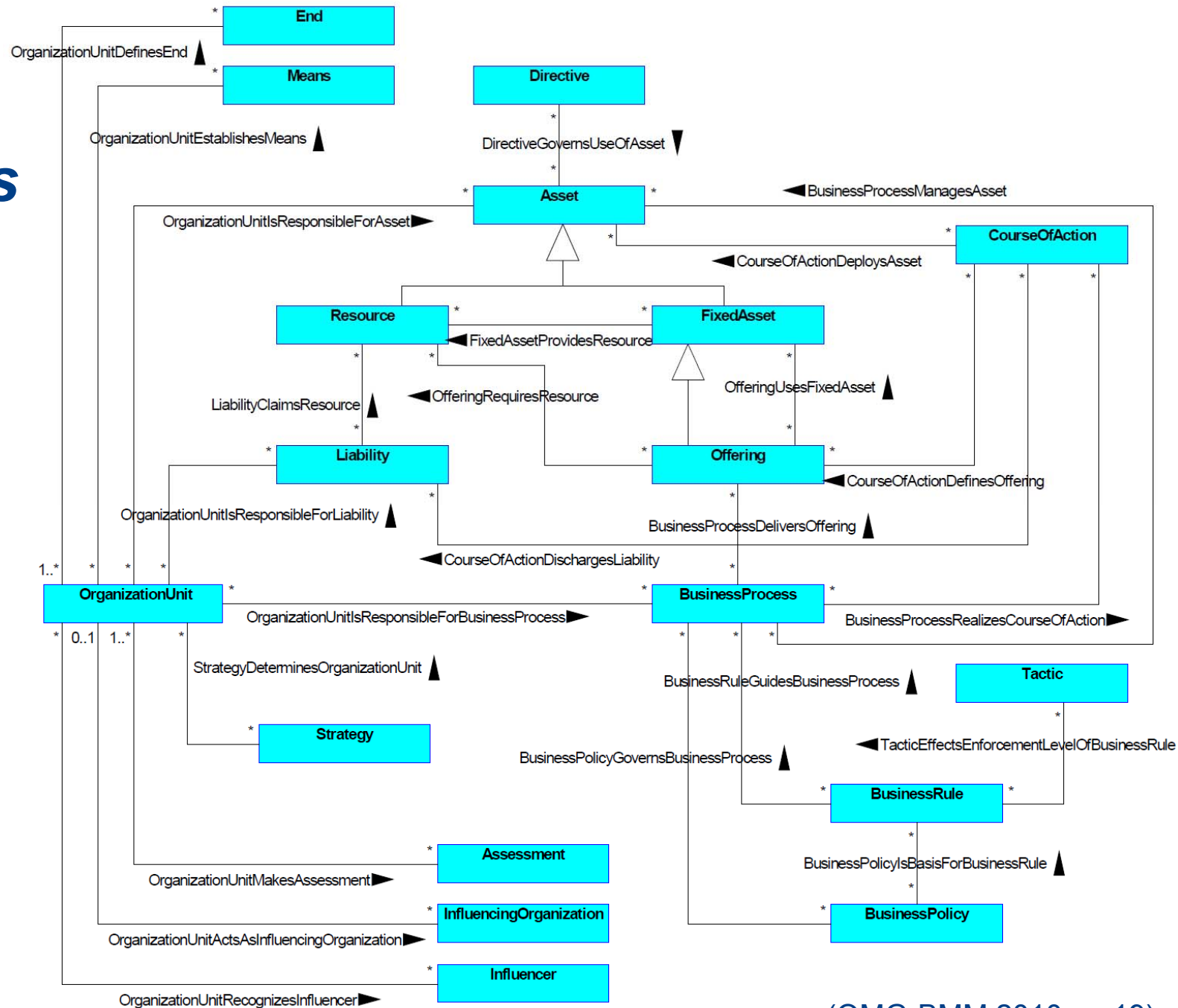
(Bridgeland & Zahavi 2009, p. 63)



Placeholders



BMM Placeholders



(OMG-BMM 2010, p. 19)

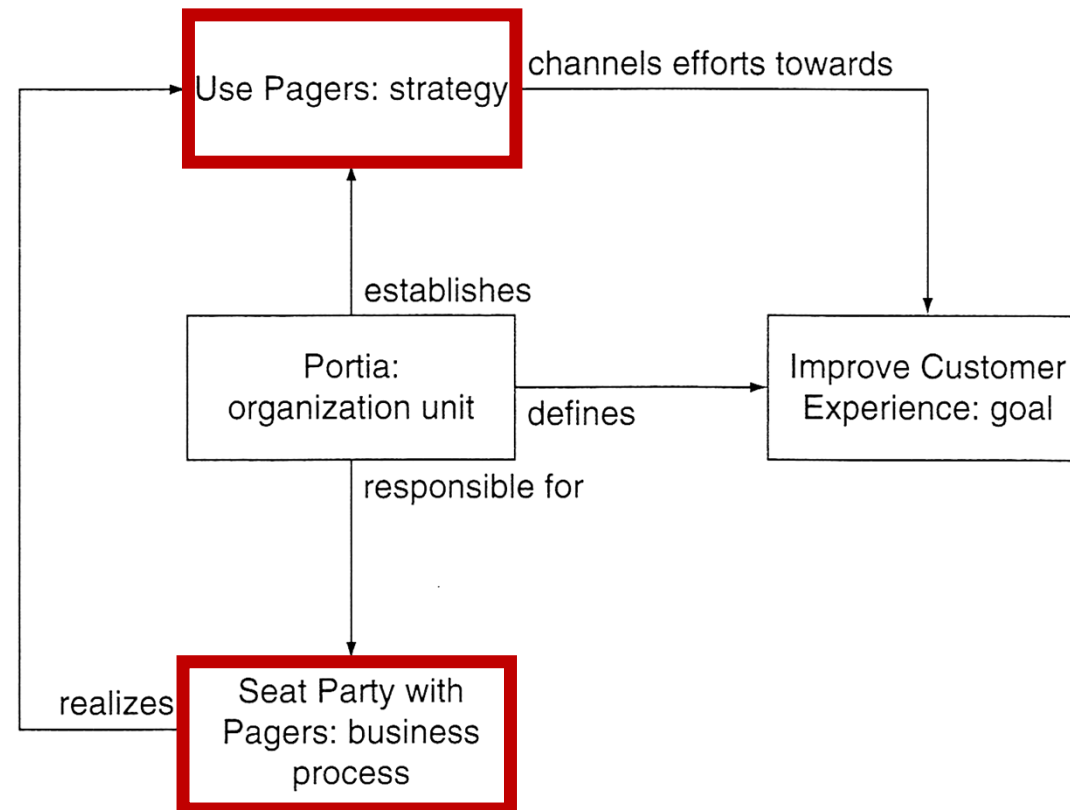


Placeholders

- 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,
 - ◆ Business Process Definition, and
 - ◆ Business Rules.
- Business Rule is both a core concept of the BMM and can also be modeled externally (albeit that its definition is adopted from SBVR).
- Organization Unit and Business Process are placeholders for association with concepts languages like OSM and BPMN.

Business Motivation and Business Processes

■ Business Processes realize *Courses of Action*

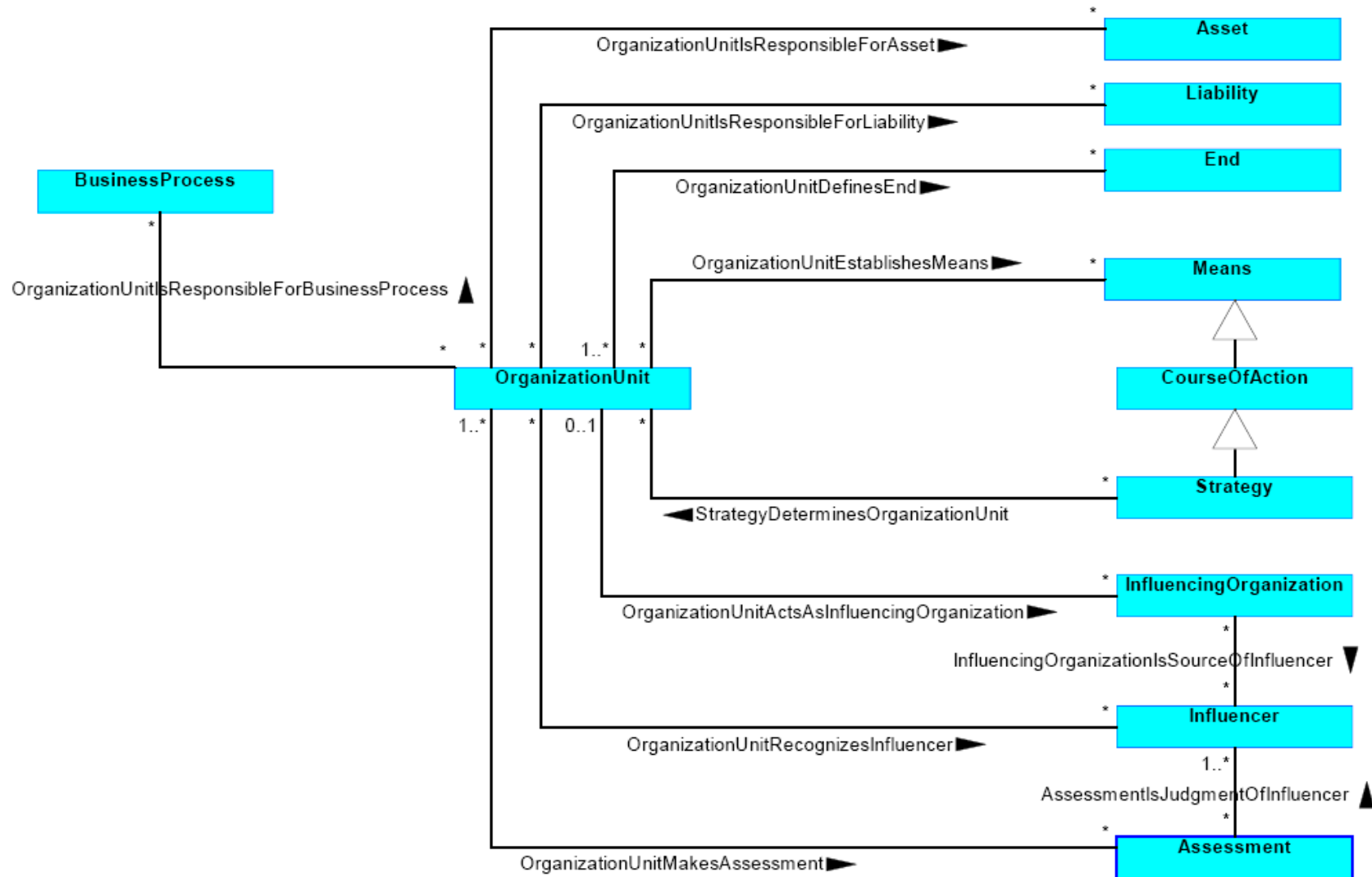


(Bridgeland & Zahavi 2009, p. 129)

Organization Unit

- For each activity and resources of an organization there should be a responsible party. These parties play key roles with respect to motivation.
- In BMM this is reflected by linking Organization Units to various elements
- 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



(OMG-BMM 2010)



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 have relations to several elements of a BMM, in particular to Courses of Action, Business Rules and Business Policies.
 - ◆ 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 on *what* Business Processes have to do and set limits on *how* Business Processes may undertake what they have to do.

Connections of Business Process

