

# Planning of Information System

# What Is an Information Systems Plan?

- Business planning – the process of identifying the firm's goals, objectives, and priorities + developing action plans for accomplishing them.
- Information systems planning – the part of business planning concerned with developing the firm's information systems resources

# Challenges in Business Planning

- Foreseeing and assessing opportunities
- Assuring consistency with organizational plans and objectives
- Building systems
- Maintaining information system performance
- Collaborating with IT professionals

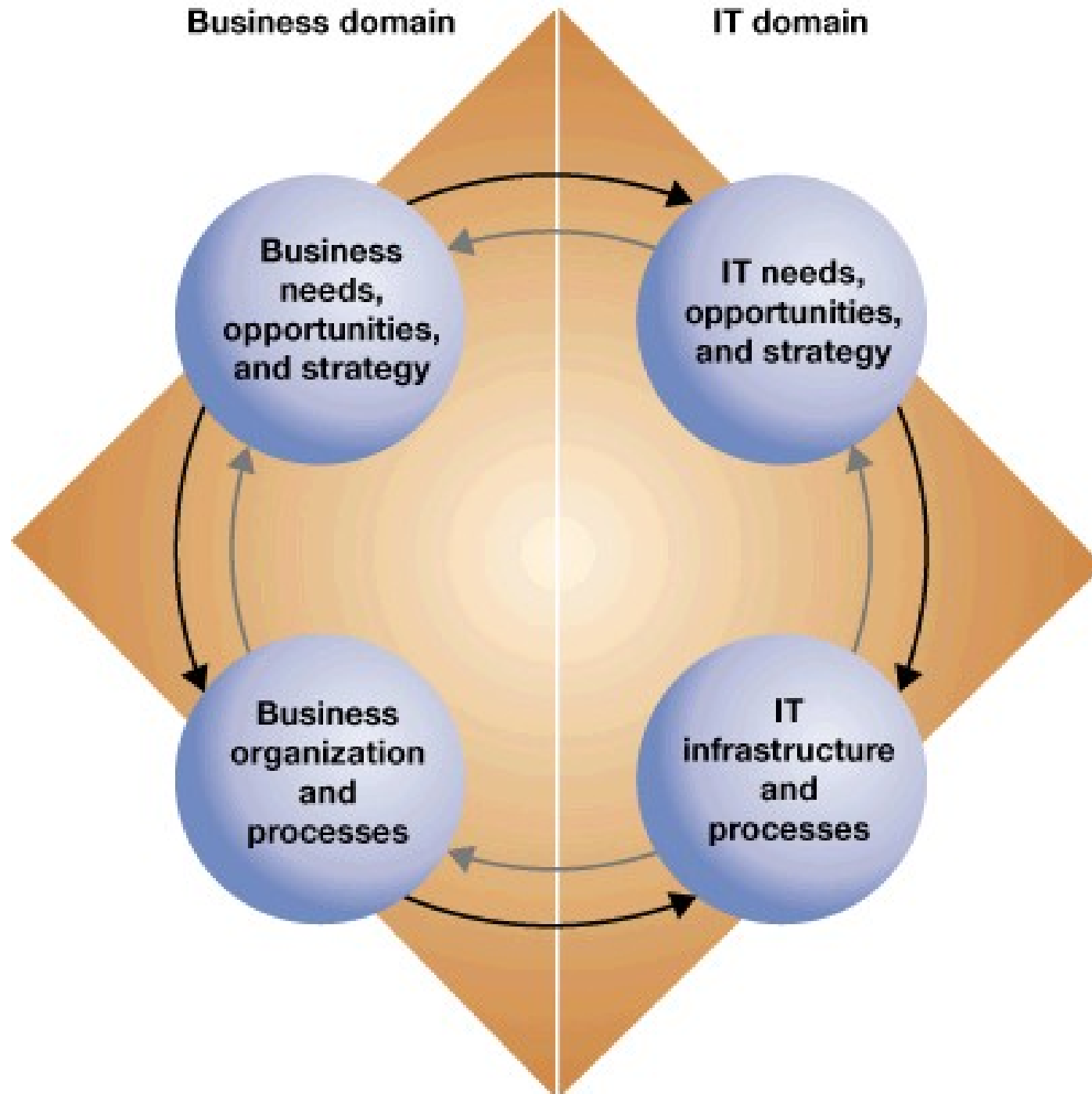
# Principles for IS Planning

- Support the firm's business strategy with appropriate technical architecture
- Evaluate technology as a component of a larger system
- Recognize life cycle costs, not just acquisition costs

# Strategic Alignment of Business and IT

**Business domain**

**IT domain**



# Consistency With Business Priorities

- **Critical success factors (CSF)** – the things that must go right for a business to succeed
  - Identify the firm's primary mission and the objectives that determine satisfactory overall performance
  - Executives identify a relatively small number of CSFs

# Reengineering and Downsizing

- Business process reengineering (BPR) – the fundamental rethinking and radical redesign of business processes to achieve *dramatic improvements in critical measures of performance*
  - Difficult and risky
- Downsizing – improve process efficiency by reducing the number of people involved in the process



# **The Planning Process**

- Management structure provides a way of distinguishing the levels of planning and organizational development which are typical of most businesses (profit or non-profit).

# Management Structure & Planning Process



**Management Structure & the Planning Process**

# The planning process - Introduction

- Three main types of plans that a manager uses  
**-operational, tactical and strategic**
- These three types of plans are stepping stones &
- Their relationship to one another aids in the achievement of organizational goals

# Evolution of planning process

- Early stages of IS - applications initiated & implemented as a separate entity without integration
- Using such approach did not satisfy the customer
- Result - Projects were behind schedule & required more resources than expected
- Soon it was clear that identifying project milestones, getting user sign off on specification &
- Scheduling management through out the cycle produces better result

# Why plans are integrated?

- Operational plans are necessary to attain tactical plans and tactical plans lead to the achievement of strategic plans
- Managers use these three main types of plans in their pursuit of company goals
- The elements of organizational planning and development are interrelated, dynamic, and interdependent as shown in the following illustration:

# Elements of Organizational Planning



## Elements of Organizational Planning

Adapted from **The Business Savvy Project Manager** (2005) by Gary Heerkens

# Strategic & Tactical Thinking

- Strategic thinking gives direction and builds systems for product & service delivery
- Tactical thinking links strategy (a long-term business plan) to operations (an immediate work plan), &
- builds systems for day-to-day work supervision, guidance, quality control, and customer relationship

# Contd...

- Thinking is the engine of both long-term and short-term planning
- It provides the intellectual and motivational framework for creativity, vision, problem-solving and opportunistic initiative
- It is therefore, possible to identify two kinds of thinking:
  - **Strategic / Systems Thinking** and
  - **Tactical / Operational Thinking.**



# Contd...

- In both instances the thinking is typically not a product of one individual, but reflects a group process of collaborative thinking, planning, and decision-making of an executive or operational team.
- Therefore, the skills of collaboration, communication, and shared vision are integral components of the creative thinking process

# What is Strategic Planning?

- Process to establish priorities on what you will accomplish in the future
- Forces you to make choices on what you will do and what you will not do
- Pulls the entire organization together around a single game plan for execution
- Broad outline on where resources will get allocated

# What is Strategic planning?

## Contd...

- Deals with the development of an org's missions, goals, strategies, policies
- Corporation may begin the process by developing a shared vision
- Uses a variety of techniques including team building, scenario modeling & consensus creating exercises
- Most strategic planning done using medium to long range planning horizon

# What is Strategic planning?

## Contd...

- However, if foreseen incidents occur, an org use strategic planning for a short time frame to confront a crisis

# Why do Strategic Planning?

- If you fail to plan, then you plan to fail

–

**Be proactive about the future**

- Strategic planning improves performance
- Counter excessive inward and short-term thinking
- Solve major issues at a macro level
- Communicate to everyone what is most important

# A Good Strategic Plan should . . .

- Address critical performance issues
- Create the right balance between what the organization is capable of doing vs. what the organization would like to do
- Cover a sufficient time period to close the performance gap
- Visionary – convey a desired future end state
- Flexible – allow and accommodate change
- Guide decision making at lower levels – operational, tactical, individual

# Objectives-Strategic IS plan

- Four main objectives:
  1. **Business alignment:** Aligning investment in IT with company's vision with strategic business goals
  2. **Competitive advantage:** Exploiting IT to create innovative & strategic IS for competitive advantage
  3. **Resource Management:** Developing plans for efficient & effective management of IT resources
  4. **Technology Architecture:** Developing technology policies & designing an IT architecture for the organization

# Strategic Planning Model

A B C D E

*Where we are*

*Where we want to be*

*How we will do it*

*How are we doing*

**A**ssessment

**B**aseline

**C**omponents

**D**own to Specifics

**E**valuate

<ul style="list-style-type: none"> <li>• Environmental Scan</li> </ul>	<ul style="list-style-type: none"> <li>• Situation – Past, Present and Future</li> </ul>	<ul style="list-style-type: none"> <li>• Mission &amp; Vision</li> </ul>	<ul style="list-style-type: none"> <li>• Performance Measurement</li> </ul>	<ul style="list-style-type: none"> <li>• Performance Management</li> </ul>
<ul style="list-style-type: none"> <li>• Background Information</li> </ul>	<ul style="list-style-type: none"> <li>• Significant Issues</li> </ul>	<ul style="list-style-type: none"> <li>• Values / Guiding Principles</li> </ul>	<ul style="list-style-type: none"> <li>• Targets / Standards of Performance</li> </ul>	<ul style="list-style-type: none"> <li>• Review Progress – Balanced Scorecard</li> </ul>
<ul style="list-style-type: none"> <li>• Situational Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Align / Fit with Capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Major Goals</li> </ul>	<ul style="list-style-type: none"> <li>• Initiatives and Projects</li> </ul>	<ul style="list-style-type: none"> <li>• Take Corrective Actions</li> </ul>
<ul style="list-style-type: none"> <li>• SWOT – Strength's, Weaknesses, Opportunities, Threats</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps</li> </ul>	<ul style="list-style-type: none"> <li>• Specific Objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Action Plans</li> </ul>	<ul style="list-style-type: none"> <li>• Feedback upstream – revise plans</li> </ul>



# Pre-Requisites to Planning

Before you begin, make sure the groundwork has been done to make the planning process work like

- Senior leadership commitment
- Who will do what?
- What will each group do?
- How will we do it?
- When is the best time?



Assessment

# Assessment Model: S W O T

Assessment

Internal Assessment: Organizational assets, resources, people, culture, systems, partnerships, suppliers, . . .



External Assessment: Marketplace, competitor's, social trends, technology, regulatory environment, economic cycles .



## SWOT

### Good Points

- Easy to Understand
- Apply at any organizational level

## SWOT

### Possible Pitfalls

- Needs to be Analytical and Specific
- Be honest about your weaknesses

# Strength's

- Strength's – Those things that you do well, the high value or performance points
- Strengths can be **tangible**: Loyal customers, efficient distribution channels, very high quality products, excellent financial condition
- Strengths can be **intangible**: Good leadership, strategic insights, customer intelligence, solid reputation, high skilled workforce

# Weaknesses

- Weaknesses – Those things that prevent you from  
doing what you really need to do
- Since weaknesses are internal, they are  
within  
your control
- Weaknesses include: Bad leadership,  
unskilled  
workforce, insufficient resources, poor  
product  
quality, slow distribution and delivery  
channels,

# Opportunities

- Opportunities – Potential areas for growth and higher performance
- External in nature – marketplace, unhappy customers with competitor's, better economic conditions, more open trading policies, . .
- Internal opportunities should be classified as Strength's
- Timing may be important for capitalizing on opportunities

# Threats

- Threats – Challenges confronting the organization,  
external in nature
- Threats can take a wide range – bad press coverage, shifts in consumer behavior, substitute products, new regulations, . . .
- May be useful to classify or assign probabilities to threats
- The more accurate you are in identifying threats,



Baseline



# Why create a baseline

- Puts everything about the organization into a single context for comparability and planning
- Descriptive about the company as well as the overall environment
- Include information about relationships – customers, suppliers, partners, . . .
- Preferred format is the Organizational Profile

# Organizational Profile

Baseline

## 1. Operating Environment

- **Products and Services** – Suppliers, Delivery Channels, Contracts, Arrangements, . . .
- **Organizational Culture** – Barriers, Leadership, Communication, Cohesiveness . . . .
- **Workforce Productivity** – Skill levels, diversity, contractor's, aging workforce, . . .
- **Infrastructure** – Systems, technology, facilities, . .
- **Regulatory** – Product / Service Regulation, ISO

# Organizational Profile

## 2. Business Relationships

Baseline

- **Organizational Structure** – Business Units, Functions, Board, Management Layers, . . .
- **Customer Relationships** – Requirements, Satisfaction, Loyalty, Expectations, . . .
- **Value Chain** – Relationship between everyone in the value chain . . . .
- **Partner Relationships** – Alliances, long-term suppliers, customer partnerships, . . .

# Organizational Profile

## 3. Key Performance Categories

Baseline

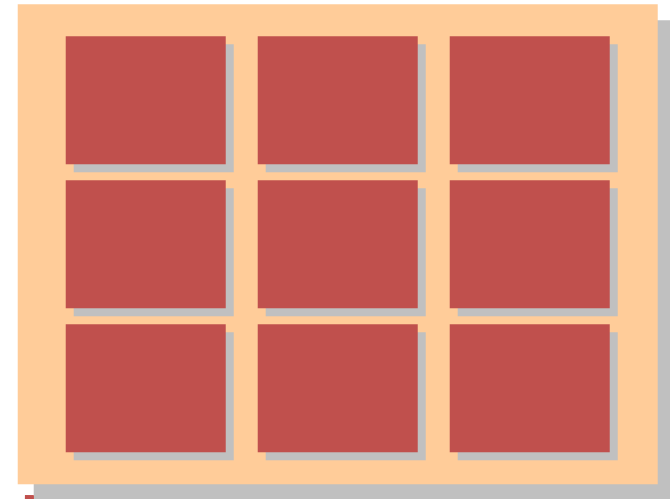
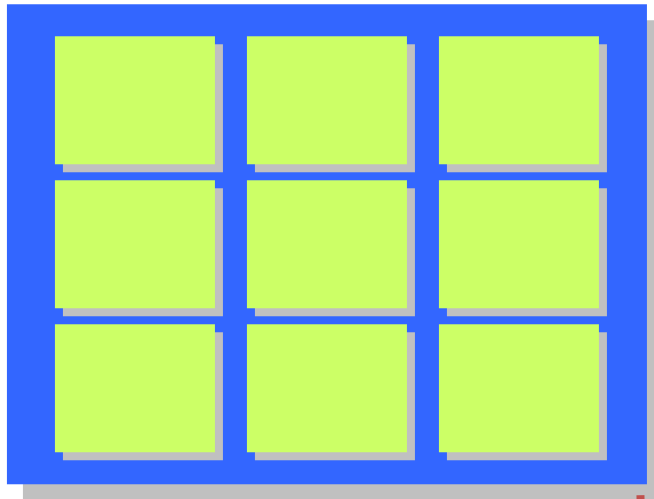
- Customer
- Products and Services
- Financial
- Human Capital
- Operational
- External (Regulatory Compliance, Social Responsibility, . . . )

# Gap Analysis

Baseline

Baseline / Org Profile

Challenges / SWOT



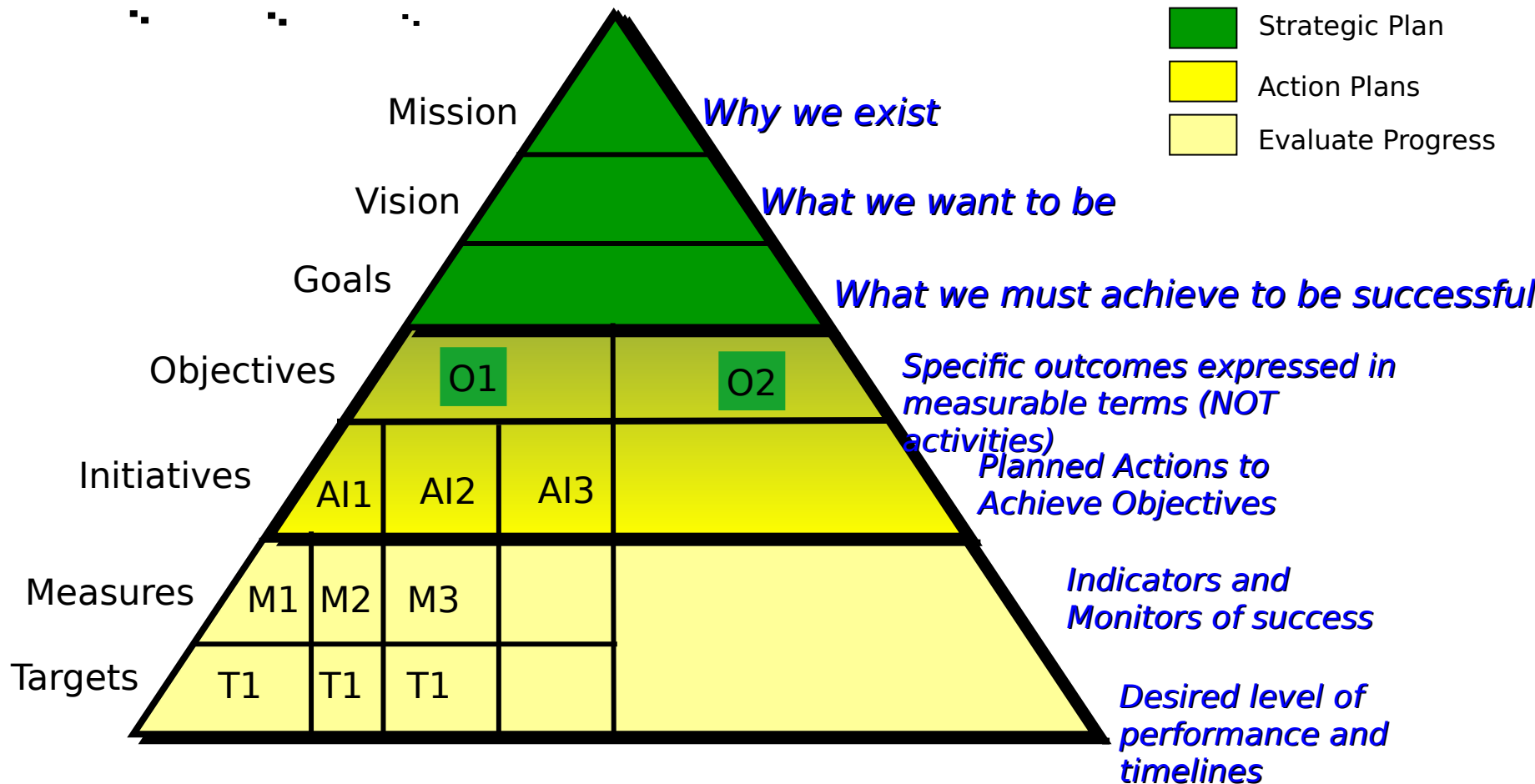
*Gap = Basis for Long-Term Strategic Plan*



Components

# Major Components of the Strategic Plan / Down to Action

Components



# Mission Statement

- Captures the essence of why the organization exists – Who we are, what we do
- Explains the basic needs that you fulfill
- Expresses the core values of the organization
- Should be brief and to the point
- Easy to understand
- If possible, try to convey the unique nature of your organization and the role it plays that differentiates



# Examples – Good and Bad Mission Statements

Components

NASA

To Explore the Universe  
and Search for Life  
and to Inspire the  
Next Generation of  
Explorers

*Does a good job of expressing the core values of the organization. Also conveys unique qualities about the organization.*

Walt Disney

To Make People Happy

*Too vague and unclear. Need more descriptive information about what makes the organization special.*

# Vision

- How the organization wants to be perceived in the future – what success looks like
- An expression of the desired end state
- Challenges everyone to reach for something significant – inspires a compelling future
- Provides a long-term focus for the entire organization

# Guiding Principles and Values

- Every organization should be guided by a set of values and beliefs
- Provides an underlying framework for making decisions – part of the organization's culture
- Values are often rooted in ethical themes, such as honesty, trust, integrity, respect, fairness, . . . .
- Values should be applicable across the entire organization

# Examples of Guiding Principles and Values

Components

We obey the law and do not compromise moral or ethical principles – ever!  
We expect to be measured by what we do, as well as what we say.

We treat everyone with respect and appreciate individual differences.  
We carefully consider the impact of business decisions on our people and we recognize exceptional contributions.

We are strategically entrepreneurial in the pursuit of excellence, encouraging original thought and its application, and willing to take risks based on sound business judgment.

We are committed to forging public and private partnerships that combine diverse strengths, skills and resources.

# Goals

- Describes a future end-state – desired outcome
  - that is supportive of the mission and vision.
- Shapes the way ahead in actionable terms.
- Best applied where there are clear choices about the future.
- Puts strategic focus into the organization – specific
  - ownership of the goal should be assigned to someone within the organization.
- May not work well where things are changing fast

# Developing Goals

- Cascade from the top of the Strategic Plan – Mission, Vision, Guiding Principles.
- Look at your strategic analysis – SWOT, Environmental Scan, Past Performance, Gaps . . .
- Limit to a critical few – such as five to eight goals.
- Broad participation in the development of goals:
  - Consensus from above – buy-in at the execution level.
- Should drive higher levels of performance

# Examples of Goals

Reorganize the entire organization for better responsiveness to customers

We will partner with other businesses, industry leaders, and government agencies in order to better meet the needs of stakeholders across the entire value stream.

Manage our resources with fiscal responsibility and efficiency through a single comprehensive process that is aligned to our strategic plan.

Improve the quality and accuracy of service support information provided to our internal customers.

Establish a means by which our decision making process is market and customer focus.

Maintain and enhance the physical conditions of our public facilities.

# Objectives

- Relevant - directly supports the goal
- Compels the organization into action
- Specific enough so we can quantify and measure the results
- Simple and easy to understand
- Realistic and attainable
- Conveys responsibility and ownership
- Acceptable to those who must execute
- May need several objectives to meet a goal



# Goals vs. Objectives

<b><u>GOALS</u></b>	<b><u>OBJECTIVES</u></b>
<b>Very short statement, few words</b>	<b>Longer statement, more descriptive</b>
<b>Broad in scope</b>	<b>Narrow in scope</b>
<b>Directly relates to the Mission Statement</b>	<b>Indirectly relates to the Mission Statement</b>
<b>Covers long time period (such as 10 years)</b>	<b>Covers short time period (such 1 year budget cycle)</b>

# Examples of Objective

Components

Develop a customer intelligence database system to capture and analyze patterns in purchasing behavior across our product line.

Launch at least three value stream pilot projects to kick-off our transformation to a leaner organization.

Centralize the procurement process for improvements in enterprise-wide purchasing power.

Consolidate payable processing through a P-Card System over the next two years.

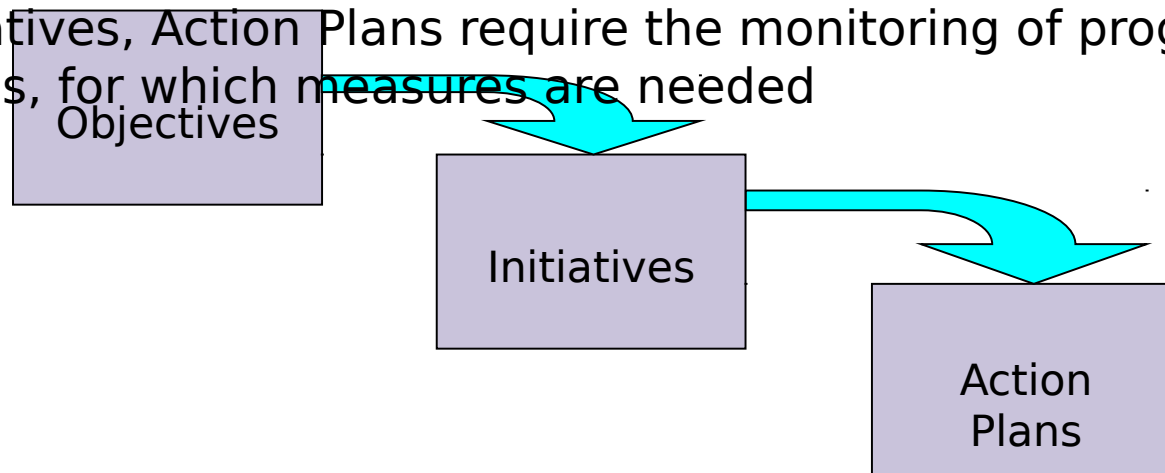
Monitor and address employee morale issues through an annual employee satisfaction survey across all business functions.



Down to Specifics

# What are Action Plans?

- The Action Plan identifies the **specific steps** that will be taken to achieve the initiatives and strategic objectives – where the rubber meets the road
- Each Initiative has a supporting Action Plan(s) attached to it
- Action Plans are geared toward operations, procedures, and processes
- They describe who does what, when it will be completed, and how the organization knows when steps are completed
- Like Initiatives, Action Plans require the monitoring of progress on Objectives, for which measures are needed



# Characteristics of Action Plans

Down to  
Specifics

- **Assign responsibility** for the successful completion of the Action Plan. Who is responsible? What are the roles and responsibilities?
- **Detail all required steps** to achieve the Initiative that the Action Plan is supporting. Where will the actions be taken?
- **Establish a time frame** for the completion each steps. When will we need to take these actions?
- **Establish the resources** required to complete the steps. How much will it take to execute these actions?
- Define the **specific actions** (steps) that must be taken to implement the initiative. **Determine the deliverables (in measurable terms)** that should result from **completion** of individual steps. **Identify in-process measures** to ensure the processes used to carry out the action are working as intended. **Define the expected results** and milestones of the action plan.
- Provide a **brief status report on each step**, whether completed or not. What **communication process** will we follow? How well are we doing in executing our action plan?
- Based on the above criteria, you should be able to clearly define your action plan. **If you have several action plans, you may have to prioritize.**

# Action Plan Execution

- Requires that you have answered the Who, What, How, Where, and When questions related to the project or initiative that drives strategic execution
- **Coordinate** with lower level sections, administrative and operating personnel since they will execute the Action Plan in the form of specific work plans
- **Assign action** responsibility and set timelines – Develop working plans and schedules that have specific action steps
- Resource the project or initiative and document in the form of detail budgets (**may require reallocation prior to execution**)
- **Monitor** progress against milestones and measurements
- **Correct and revise action** plans per comparison of actual results against original action plan

# Quantify from Action Level Up

Down to  
Specifics

- Measure your milestones in short-term outcomes at the Action Item level.
- Measure the outcomes of your objectives.
- Try to keep your measures one per objective.
- May want to include lead and lag measures to depict cause-effect relationships if you are uncertain about driving (leading) the desired outcome.
- Establish measures using a template to

# Criteria for Good Measures

**Integrity** – Complete; useful; inclusive of several types of measure; designed to measure the most important activities of the organization

**Reliable:** Consistent

**Accurate** - Correct

**Timely** – Available when needed: designed to use and report data in a usable timeframe

**Confidential and Secure:** Free from inappropriate release or attack



# Examples of Measurement Lead Indicators

Down to  
Specifics

- Average time to initiate customer contact => shorter time should lead to better customer service
- Average response time to incident => below average response times should lead to increased effectiveness in dealing with incident
- Facilities that meet facility quality A1 rating => should lead to improved operational readiness for meeting customer needs

# Examples of Measurement Lag Indicators

Down to  
Specifics

- Overall customer satisfaction rating => how well you are doing looking back
- Business Units met budgeted service hour targets => after the fact reporting of service delivery volume
- Number of category C safety accidents at construction sites => historical report of what has already taken place

# Targets

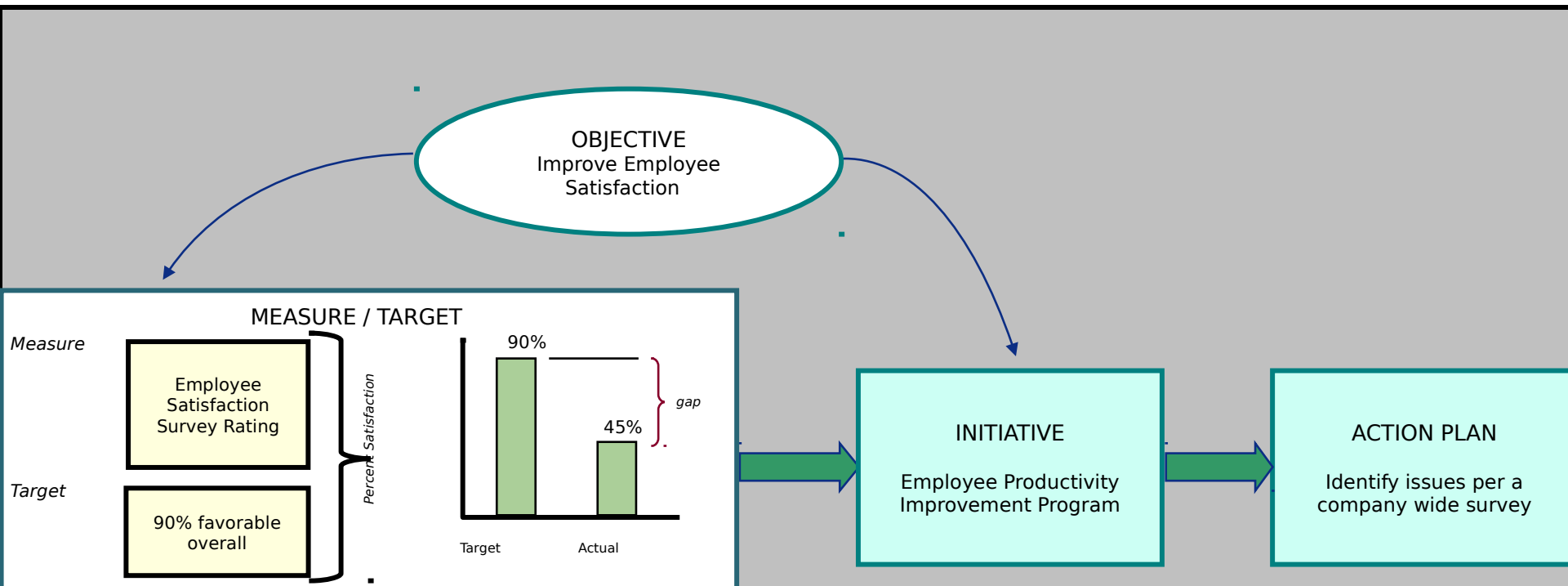
- For each measurement, you should have at least one target
- Targets should stretch the organization to higher levels of performance
- Incremental improvements over current performance can be used to establish your targets
- Targets put focus on your strategy
- When you reach your targets, you have successfully executed your strategy

# Examples of Targets

Average Time to Process New Employee Setups in DB	65 days Year 2007	60 days Year 2008	55 days Year 2009
Utilization Rate for Rental Housing Units	90% for Year 2007	92% for Year 2008	95% for Year 2009
Toxic Sites meeting in-service compliance	55% for Year 2007	70% for Year 2008	95% for Year 2009
Personnel Fully Trained in Safety and Emergency	65% by 2 <sup>rd</sup> Quarter	75% by 3 <sup>th</sup> Quarter	90% by 4 <sup>th</sup> Quarter
Open Positions Filled after 30 day promotion period	75 positions Sept 2007	100 positions Jan 2008	135 positions July 2008
% Reduction in Orders Filled Short in 1 <sup>st</sup> Cycle	50% by Year 2008	65% by Year 2009	85% by Year 2010

# Sanity Check . . .

Make sure everything is linked and connected for a tight end-to-end model for driving strategic execution.





Evaluate

# Continuous Feedback through the Balanced Scorecard



Evaluate

- Cascade and align from the top to create a Strategic Management System.
- Use the Balanced Scorecard framework to organize and report actionable components.
- Use the Scorecard for managing the execution of your strategy.
- Scorecard “forces” you to look at different perspectives and take into account cause-effect relationships (lead and lag indicators)
- Improves how you communicate your strategy – critical to execution.

## D2-D5: Build the Balanced Scorecard

# Performance Management

- Establish a regular review cycle using your balanced scorecard.
- Analyze and compare trends using graphs for rapid communication of performance.
- Don't be afraid to change your metrics – life cycle (inputs to outputs to outcomes)
- Work back upstream to revise your plans: Action Plans > Operating Plans > Strategic Plans
- Planning is very dynamic – must be flexible to change.
- Recognize and reward good performance results
- Brainstorm and change – take corrective action on poor performance results.



# Automating the Process

## D2-D5: Build the Balanced Scorecard



Evaluate

1. Active Strategy ([www.activestrategy.com](http://www.activestrategy.com))
2. Corda ([www.corda.com](http://www.corda.com))
3. Corporater ([www.corporater.com](http://www.corporater.com))
4. Rocket CorVu ([www.corvu.com](http://www.corvu.com))
5. Cockpit Communicator ([www.4ghi.com](http://www.4ghi.com))
6. Biz Score ([www.efmsoftware.nl](http://www.efmsoftware.nl))
7. Executive Dashboard ([www.iexecutivedashboard.com](http://www.iexecutivedashboard.com))
8. PM Express ([www.pm-express.com](http://www.pm-express.com))
9. Strategy 2 Act ([www.strategy2act.com](http://www.strategy2act.com))
10. 20 20 Software ([www.cashfocus.com](http://www.cashfocus.com))

# Link Budgets to Strategic Plan



Evaluate

- The world's best Strategic Plan will fail if it is not adequately resourced through the budgeting process
- Strategic Plans cannot succeed without people, time, money, and other key resources
- Aligning resources validates that initiatives and action plans comprising the strategic plan support the strategic objectives

# What Resources?

## How to Link?



Evaluate

Every Action Plan should identify the following:

- The people resources needed to succeed
- The time resources needed to succeed
- The money resources needed to succeed
- The physical resources (facilities, technology, etc.) needed to succeed

Resource information is gathered by Objective Owners which is provided to the Budget Coordinators for each Business Unit.

Resources identified for each Action Plan are used to establish the total cost of the Initiative.

Cost-bundling of Initiatives at the Objective level is used by our Business Unit Budget Coordinators to create the Operating Plan Budget

# Some Final Thoughts

- Integrate all components from the top to the bottom: Vision > Mission > Goals > Objectives > Measures > Targets > Initiatives > Action Plans > Budgets.
- Get Early Wins (Quick Kills) to create some momentum
- Seek external expertise (where possible and permissible)
- Articulate your requirements to senior leadership if they are really serious about strategic execution

# Tactical Plans

- **Tactical plans** support strategic plans by translating them into specific plans relevant to a distinct area of the organization.
- Tactical plans are concerned with the responsibility and functionality of lower-level departments to fulfill their parts of the strategic plan
- It involves the design of tactics, setting of objectives, development of procedures, rules, schedules & budgets

# Tactical Plans contd...

- Most tactical IS planning is done on a short range basis
- It builds on business/IT strategies developed in strategic IS planning stages
- It produces project proposals for development of new or Improved IS that implement IT architecture created during strategic IS planning

# Tactical Plans contd...

- These projects are then evaluated, ranked & fitted in multilayer development plan
- Finally, a resource allocation plan is developed to specify the IS resources, financial commitments & org. change needed to implement strategic IT development plan of firm
- Budget acts as a control mechanism

# Example: Tactical Plans

- For example, when Martha, the middle-level manager at Nino's, learns about Tommy's strategic plan for increasing productivity, Martha immediately begins to think about possible tactical plans to ensure that happens.



# Contd...

- Tactical planning for Martha might include things like testing a new process in making pizzas that has been proven to shorten the amount of time it takes for prepping the pizza to be cooked or perhaps looking into purchasing a better oven that can speed up the amount of time it takes to cook a pizza or even considering ways to better map out delivery routes and drivers

# Contd...

- . As a tactical planner, Martha needs to create a set of calculated actions that take a shorter amount of time and are narrower in scope than the strategic plan is but still help to bring the organization closer to the long-term goal.
-

# Operational Plans

- **Operational plans** sit at the bottom of the totem pole;
- They are the plans that are made by frontline, or low-level, managers.
- All operational plans are focused on the specific procedures and processes that occur within the lowest levels of the organization
- Managers must plan the routine tasks of the department using a high level of detail.

# Operational Plans contd...

- It involves detailed planning for accomplishment of new IS development projects
- Includes preparation of operating budgets
- Annual operating budgets specify allocation of financial & other resources needed in support the organization's information service operations & system development & maintenance activities

- Project planning is an important operational planning function
- It involves development of plans, procedures & schedule for IS development project
- Such planning is an important part of the project management effort that plans & controls the implementation of business projects

# Contd...

- Frank, the frontline manager at Nino's Pizzeria, is responsible for operational planning.
- Operational planning activities for Frank would include things like scheduling employees each week; assessing, ordering and stocking inventory; creating a monthly budget; developing a promotional advertisement for the quarter to increase the sales of a certain product (such as the Hawaiian pizza) or outlining an employee's performance goals for the year.

- Operational plans can be either single-use or ongoing plans.
- **Single-use plans** are those plans that are intended to be used only once.
- They include activities that would not be repeated and often have an expiration.
- Creating a monthly budget and developing a promotional advertisement for the quarter to increase the sales of a certain product are examples of how Frank would utilize single-use planning.
-

# Contd...

- Operational plans are made by low-level managers.
- **Ongoing plans** are those plans that are built to withstand the test of time.
- They are created with the intent to be used several times and undergo changes when necessary.
- Outlining an employee's performance goals for the year would be considered an ongoing plan that Frank must develop, assess and update, if necessary. Ongoing plans are typically a **policy**, **procedure** or **rule**.



- Policies are general statements, or guidelines, that aid a manager in understanding routine responsibilities of his or her role as a manager.
- Examples of policies include things such as hiring, training, outlining and assessing performance appraisals and disciplining and terminating subordinates.
- A procedure details the step-by-step process of carrying out a certain task, such as assessing, ordering and stocking inventory.
- A rule provides managers and employees with specific and explicit guidelines of behavior that is what they should and should not do as a member of the organization

# IS planning methodologies

- Scenario based
- CSF(Critical Success Factors)