

IT Planning

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1 Introduction

One of the roles of information technology management is to establish overall strategic direction for the information systems. This direction is a rough outline of what technological capabilities the organization is aiming at—they drive the architectural decisions as well as mini-decisions that drive individual projects.

The steps involved are roughly:

- Assess the current state of information technology: cannot move forward until we know where we are.
- Establishing a goal: where is the organization heading.
- Define the architecture: these are essentially the guidelines for getting to the goal.
- The strategic plan, or the road-map is a guide on how to get from here to there: from what the organization possesses now, to where it needs to be.
- The operational plans that collectively orchestrate the strategic plan.

Below is more detailed versions of the above.

2 Assessing current state

This step is often accomplished by business users with focus on business capabilities. Existing technologies are reviewed, with user satisfaction and business effectiveness being important factors.

An example would be: The enterprise currently has 17 databases (from 5 different vendors, and 1 home-grown), each serving the needs of individual departments. In order to join/relate data between them, operations needs to extract data and re-import it into the appropriate analytical environment. Customers data is stored across multiple systems. etc. All of this hardware is sitting in a mini data-center in the building basement.

3 Information technology vision

Establishing a vision requires the foresight to know where the business wants to go. The vision document envisions the business in the future in the desired state—and then imagines what information technology systems are required in that state.

An example of that might be: The non-IT business should not own or manage hardware. All organizational data should be join-able in a single environment, and there should be multiple environments enabling different use-cases (research, etc.)

4 Defining the architecture

The architecture defines how stuff fits together. Can we build the future one brick at a time without much planning to how they fit together, or do we need to design the whole house before individual building blocks.

The alternatives are:

- each business need is solved by a stand-alone application built for that need.
- standardize overall tech stack: e.g. an organization where each business unit is essentially a module of an overall ERP package.
- a hybrid of the above two.

5 Strategic Plan

There's strategy and tactics. Strategy is an overall guide on how to proceed to reach the desired end state.

An example might be: whenever a project is touched/modified, it is moved to the cloud, with a setup that separates processing from data.

6 Operational Plans

These are the tactical plans that are short-term, but guide the organization down the strategic plan.

An example might be: moving a local database to AWS, with storage in ORC format on S3, enabling any process that can read ORC files from S3 to process the data. This keeps existing users happy, and allows other tools to read/write data without complex exports/imports.