

# Reverse Planning (AKA backward design)

## Problem

How to create a plan to reach a goal?

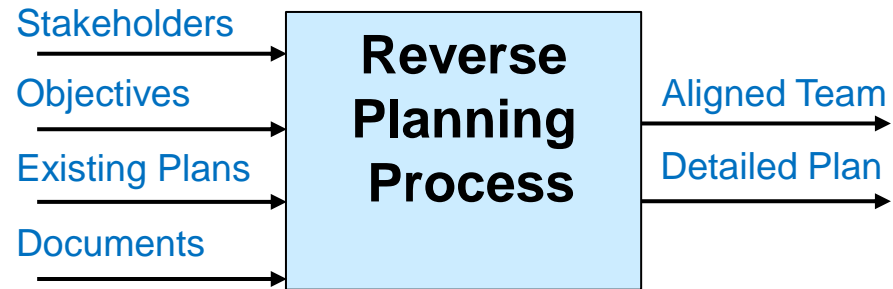
## Difficulty

Some training required

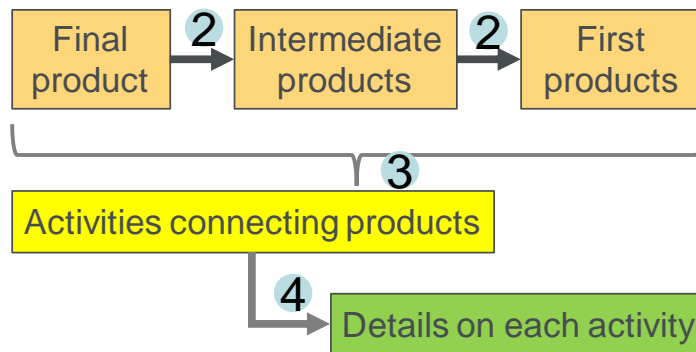
**Reverse Planning** is a high energy team-building approach to develop schedules based on network logic.

**When should I use it? When ...**

- determining needed activities
- building a schedule
- creating a detailed plan to support an existing schedule



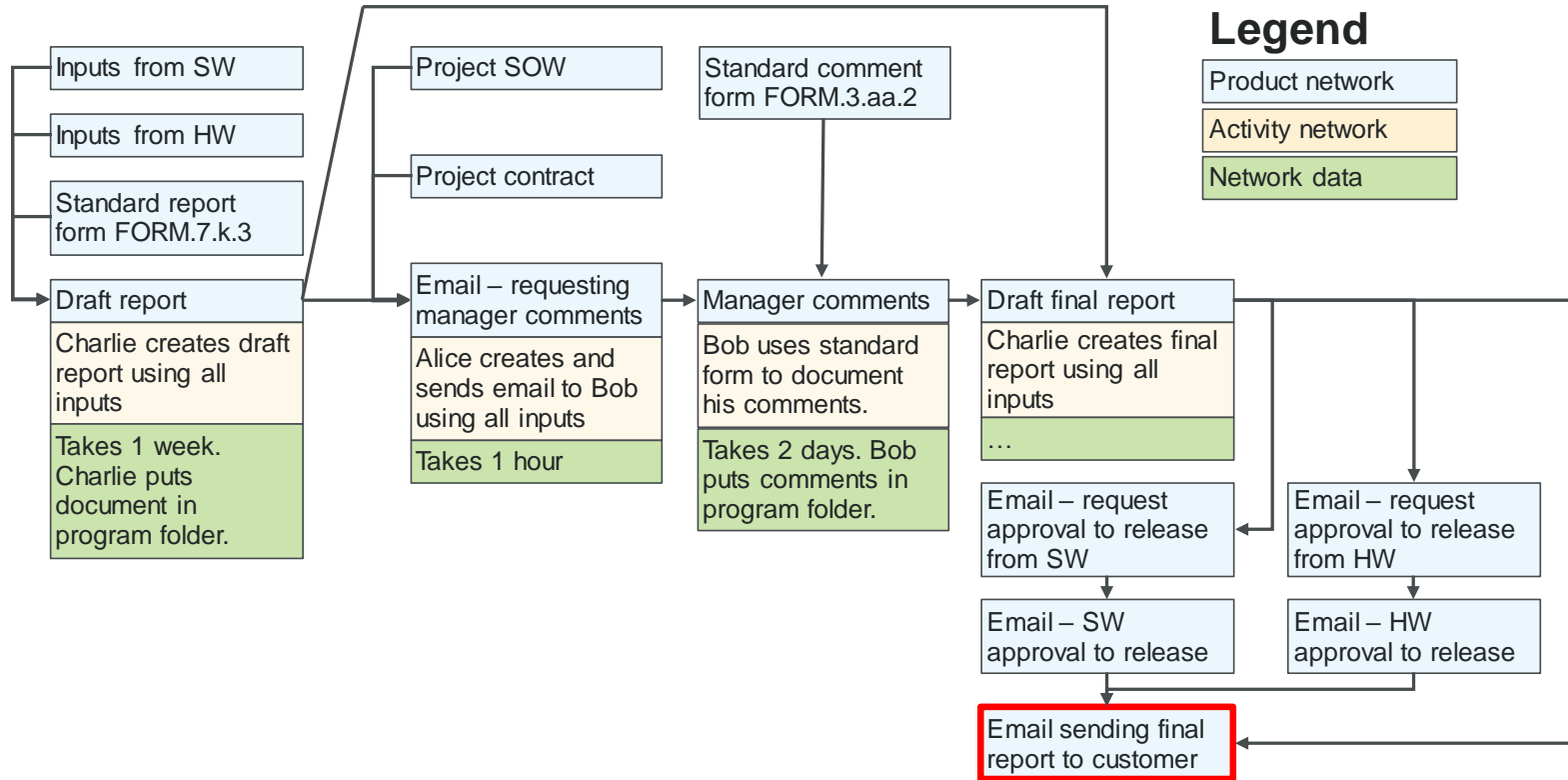
## Reverse Planning Process



Tangible products = "something you can hold in your hand" = {emails, designs, reports, approvals, manufactured items, ...}

1. Identify the **end objective**
2. Define the **Product Network**
  - Determine the tangible products required, starting with the last; define dependencies between them
3. Define the **Activity Network**
  - Determine the activities necessary to create the products; define their dependencies
4. Populate the **Network Data**
  - For each activity, define its duration, needed resources, and the definition of "Done"
5. Review and **optimize** the network

# Reverse Planning – Example – Sending out a report



1. This flow chart was created right to left, starting with the desired final result (box with red border).
2. First, the blue boxes were created; each of them is a “thing” (noun), something you can hold in your hand.
3. Second, a few of the needed yellow boxes were defined; they define “who” does “what” to create what is in the blue boxes.
4. Finally, the sender and receiver of each blue box (defined in the yellow box) negotiate the timeline, the inputs and outputs, and where the documents will be placed (this information is in the green boxes).
5. It takes much work to create a complete flowchart. However, when complete, it is clear to everyone what the process is, how long it will take, and who is responsible for what activities.

# Reverse Planning – Notes

## Slide 1

1. “Forward planning,” what we naturally tend to do, is planning to meet a goal by laying out sequential steps, starting from “now.” This often includes unneeded and wasteful steps.
2. Reverse planning starts with the goal and then asks the same question over and over – going backward in the process – “What is minimal effort needed to get to this step?”
3. A formal 3-step process for reverse planning is as follows:
  - A. Create a sequential sets of “products” (e.g., documents, prototypes, emails)
  - B. For each “product,” determine “what” needs to be done (e.g., “write memo”)
  - C. For each “what”, determine who the creator and recipient are, and get them to agree on the content and timeline (e.g., Alice creates a specific design which includes XX and YY, it is created in one week, and it is used by Bob).

## Slide 2

1. The length of the exercise depends on the complexity of the goal. A large project (e.g., tens of millions of dollars) may take a month by a large team.
2. Creating a reverse plan is an iterative process. Each iteration will likely
  - A. re-organize the activities
  - B. Increase the detail in each activity
3. Using stickie notes and string (literally!) on a large surface (e.g., an entire wall) is sometimes needed. This allows easy re-planning as more details are filled in and the whole process is better understood.