The Northern Nevada Chapter
® Project Management Institute

Gather More Than Requirements!

Tracy Sharp, PMP

VP Member Service

May 27, 2014

About Me!

Tracy Sharp

PMP, 2005

Project Manager, SNC

VP Member Services, PMI-NNV

Daughter, Niece, Wife, Mother, Grandmother, Friend…..

Never Make Assumptions!

Definition: Assumptions

PMI:

- Factors that, for planning purposes, are **considered** to be true, real, or certain without proof or demonstration

Dictionary

- "The act of taking something for granted, or something taken for granted."

Why make an Assumption

- **Move forward** without absolute information,
  - We assume that because the weather forecast is for a sunny day, and there is not a cloud in the sky, it will not rain so we will not take an umbrella with us to work.
  - We assume that the washing machine will not break down and overflow before we set a load of washing as we walk out the door.
  - We assume the bus will come on time when we go to the bus stop at a certain time.
- **Can learn from it**… progressive elaboration or the next project.

When?

- Typically documented at the start of the project and filed in a safe place.
- Part of the Project Charter
- Usually ignored.

Resource Assumptions

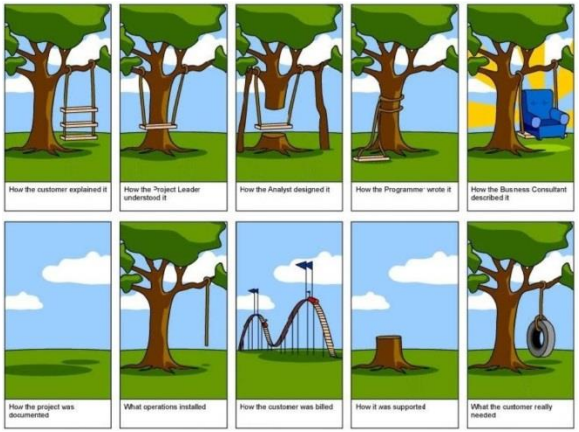
Resource assumptions can be any one item utilized that is required to complete the project.

- Resources can be **man power** and **materials**.
- An assumption made on projects for human resources is that individuals will work 40 hours per week on the day shift.
- That energy resources like **electricity** will be **on during working hours**.
- The **materials** to complete the project will **be readily available** to be utilized.

Budget Assumptions

When project financials are being planned budget assumptions are made. These are, but not limited to,

- margin of error,
- percentage allocation for resources
- material costs based a certain source
- the overall cost of day-to-day activity will not increase
- personnel costs will not change
- overall economical conditions will stay the same



Scope Assumptions

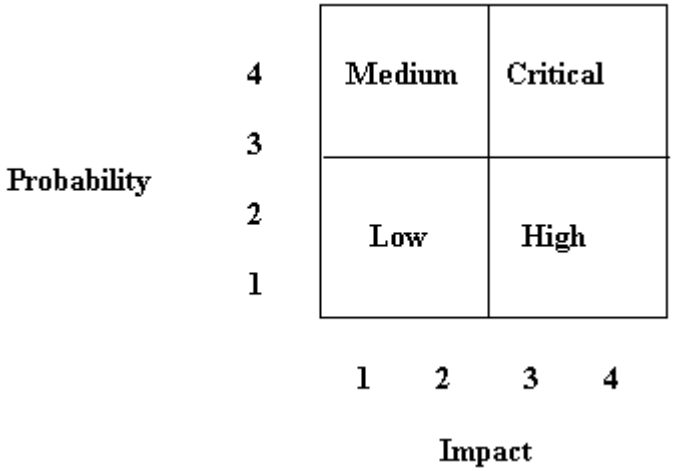
Scope assumptions should stop scope crepe.

Scope assumptions would be:

- **Scope doesn't change**
- **If is should; project will follow a change control approval process**

Assumptions and Risks

- An Assumption is, in one sense, the **flip side of a risk.**
- With an Assumption, we **expect something to happen.**
- With a risk, we **ask** what will we do
  - **if something does not happen**, or
  - how do we **increase the probability that something will happen**.
- We measure risks by looking at their **probability** and **impact**.
  - The probability may be highly likely, likely and not likely.
  - The impact may be catastrophic, significant, medium and minor.



*We might just give the parameters a numerical rating. A matrix of the impact and probability allows us to develop a **priority**.*

Rating Assumptions

Three key rating parameters

- **Confidence**. How sure are we that the Assumption is true?
- **Lead time**. How long before we can prove or disprove the Assumption?
- **Impact**. If the Assumption proves incorrect, how much rework is involved?

Confidence

- Measures how certain we are
- Can vary during the period
- Rating Scale of 1 to 4

1. **Almost Certain.** Very little doubt.
2. **Highly Confident**. Some doubt but we all feel it will be true
3. **Reasonably confident**. Our best guess at the time, but not surprised if it changed
4. **Low confidence**. If we have to guess! There are many factors that could prove us incorrect.

Lead Time

When proven true or false?

- more work will be "finished'
- less time to undo any completed work that may be required.

Lead Time is rated on a scale of 1 to 2

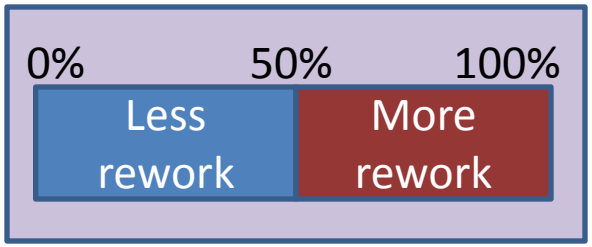
1. proven or disproven within the **first half** of the project time.
2. proven or disproven within the **second half** of the project time

Impact

amount of rework that will need to be undertaken

1. Minimal Rework
2. Some Rework
3. Medium Rework
4. Significant Rework

Could also be schedule impact



Assumption Priority

Add the three ratings together to provide an Assumption Priority.

Critical	High	Medium	Low
9-10 Pts	7-8 Pts	5-6 Pts	3-4 Low

The priority can be used to focus on potential failure points in a project.

Example	Confidence	Lead Time	Impact	Total Score
Building in a commercial area assumes there is a **solid rock layer** on which the foundations can be laid. This is based on the experience of other buildings in the area.	High - 2	First half - 1	Rework about 15% - 3	6 pts = **Medium**
Mix of **office and residential will be 50:50.** The building will not be completed for 3 years, and the market for office accommodation is volatile.	Low – 4	Long – won't know until end - 2	Significant – design and fit would have to change – Rework 20% - 3	9 pts - **Critical**

Constraints

Constraints are **limitations** placed upon the project that the project manager and team **must work within.**

Common:

- Scope
- Schedule
- Cost

May also include:

- Quality Requirements
- resources
- risk tolerances.

If constraint changes,
there is most likely impact on the other constraints

Examples

A few examples of assumptions and constraints are as follows:

Assumptions

- During the rainy season you may get cheap daily workers
- You will be provided with all resources required by you

Constraints

- You must finish 25% of the project work within 30 days
- You must work within the available resources

If there is no risk involved, then it's not an Assumption

Project: Build Cabin for Mr./Mrs Smith

Requirements:

- 3 bedrooms
- 2 baths
- Plan specs ….

Constraints:

- *Budget*: $120,000
- *Schedule*: 3 months
- *Quality*: Pass all city inspections

Assumptions:

- *Budge*: Funding provided prior to start
- *Resource*: Unlimited access to property
- *Resource*: Materials available for immediate delivery
- *Scope*: Use ABC Company Plans for Cabin, v 99.3.
- *Scope*: Plans are complete; changes will go through Change Orders

The Danger with Assumptions

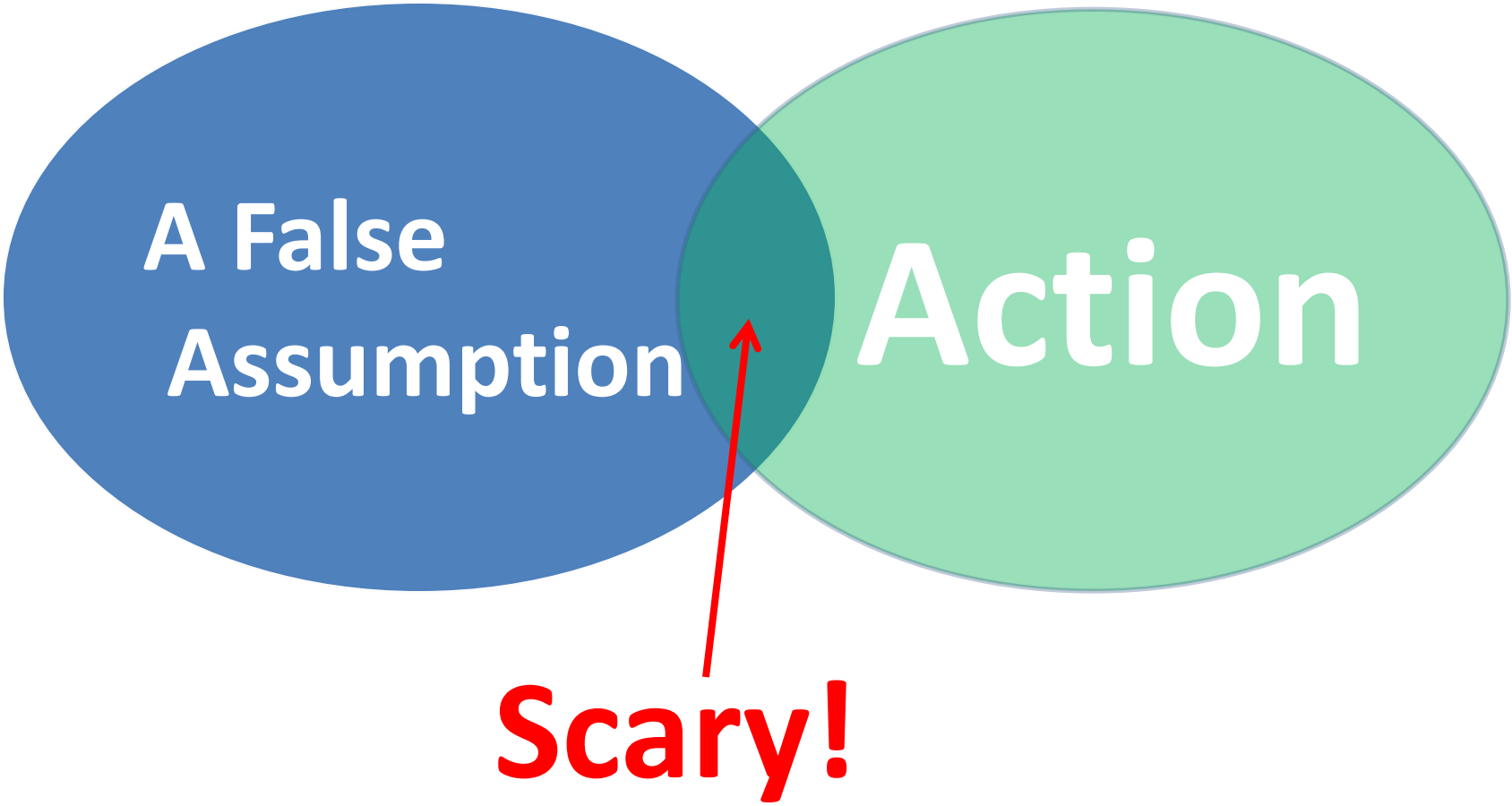
Natural tendency to become accepted as the truth.

Project Assumptions

- A similar thing can happen with projects. As projects progresses, team forgets to challenge the Assumptions.

Assumptions either become the TRUTH or FALSEHOOD

What happens if you take action on a false assumption?



The Wrong Assumption

When the Assumption is disproved, we need to look at what was built on the Assumption.

- **Review work** – what has been built on this assumption
- Does something need to be **reworked**?
- Is there **new work** that has to take place?

Monitoring and managing assumptions with the project team is a proactive way to ensure project success!

An How Are Risks Related?

What happens when assumptions are wrong? This is where risk comes into play.

Example	Confidence	Lead Time	Impact	Total Score	Risk
Materials available for immediate delivery	High – 2	Up to second half- 2	Schedule - 4	8 pts – **High**	**Materials may not be available when needed. Mitigation:**
Use ABC Company Plans for Cabin, v 99.3	Low – 4	Up to end: -2	Some Rework - 2	**8 pts – High**	**Customer may ask for changes – Low?**

Risks should have same priority as assumptions And appropriate mitigation plans!

Assumptions Over Time

Managing Assumptions

- For most or every Assumption there is a risk.
  - 1st Assumption (rock)- mitigation= maybe do test drillings.
  - 2nd - develop a number of alternate designs and establish if common components could be completed first.
- Important **input** to the risk mitigation planning.
  - Use Assumptions – sorted by priority – for your input to Risk Planning Sessions. They should **drive the priority rating for the risk**.

Monitoring Assumptions

- **Action items** should be created to **follow up Assumptions** and either **validate** or **disprove**.
  - "John Smith will review this Assumption on 7 th October to validate if it is true."

Team Exercise

Scope: Build the Tallest Freestanding Structure

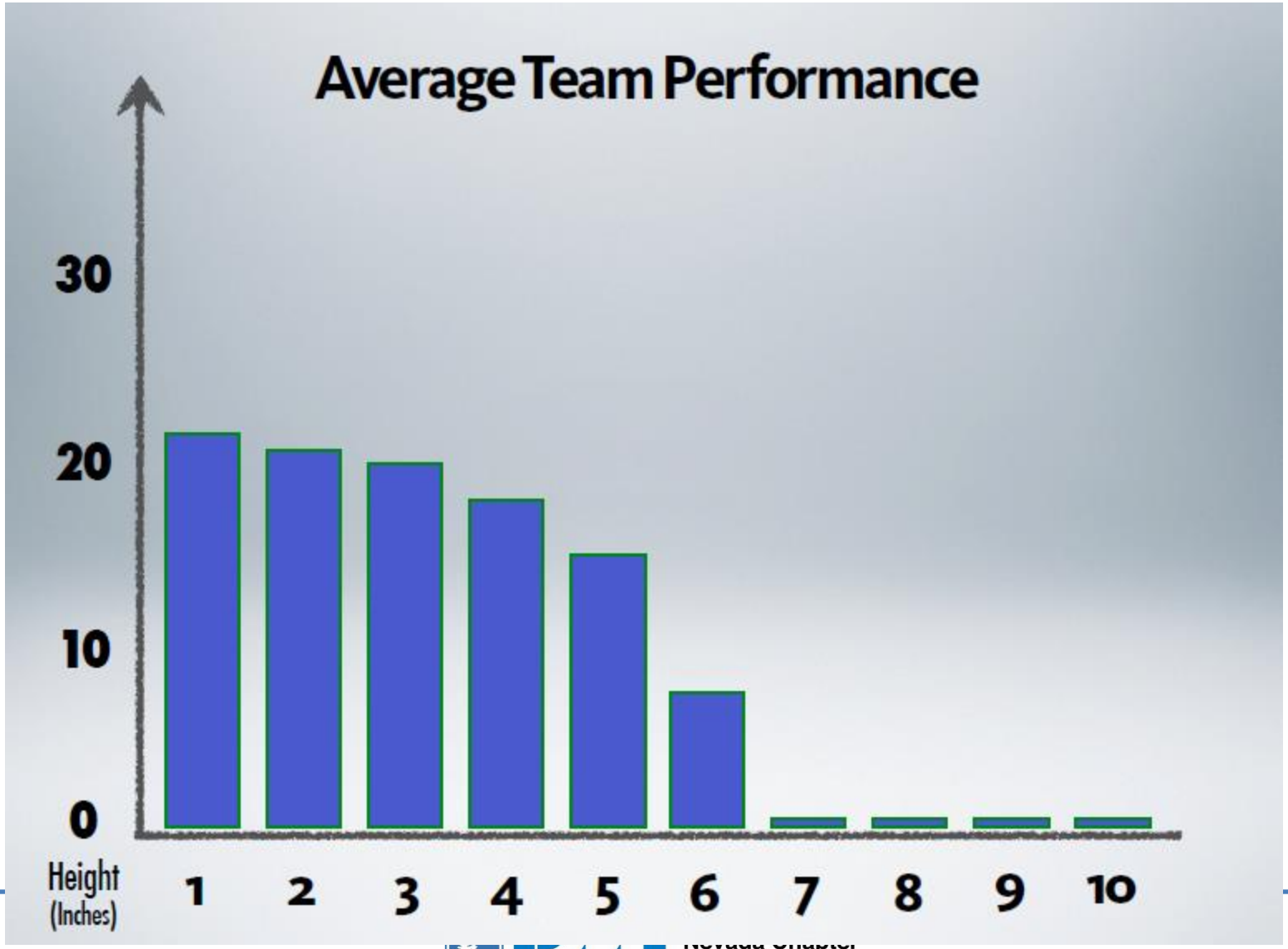
Constraints:

- Materials given to you

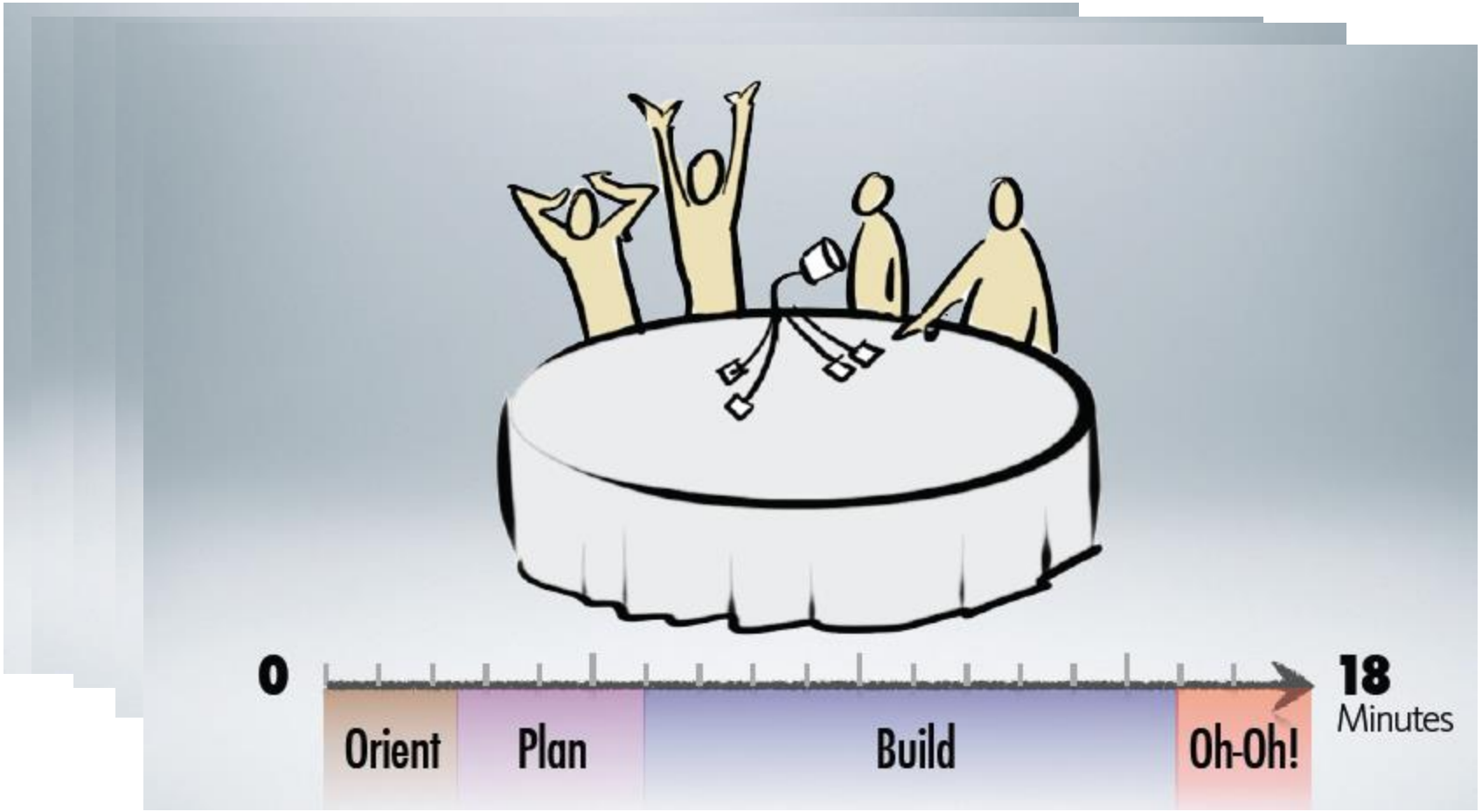
- Entire Marshmallow must be on top. Cutting marshmallow disqualifies team.
- Can not use paper bag as part of structure

Timer

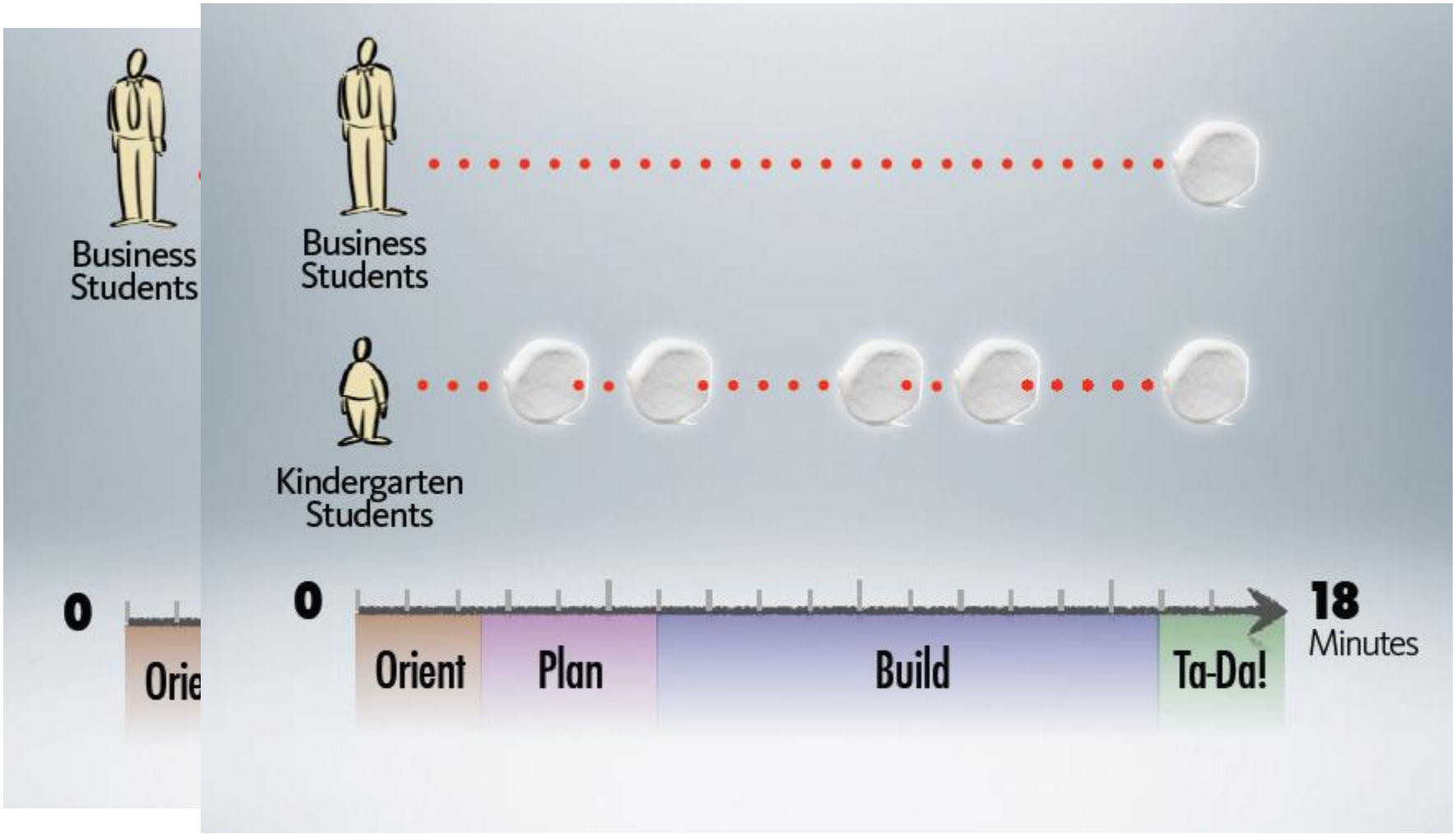
How did you do?



Lessons – Prototyping Matters



Who Performed Well?



Summary

- Assumptions are **potential** **failure points** in a project.
- They need to be **monitored** and **managed**.
- At the start of the project they should be noted, and used as input for the risk assessment.
  - If new assumptions evolve, they should be treated in the same manner.
- The **priority of the Assumption** and the **priority of the risk** should be the **same**.

Appendix

Rating Assumptions

Add the three ratings together to provide an Assumption Priority.

Critical	High	Medium	Low
9-10 Pts	7-8 Pts	5-6 Pts	3-4 Low

Confidence

How sure it's true?

- Measures how certain we are
- Can vary during the period
- Rating Scale of 1 to 4

1. **Almost Certain.** Very little doubt.
2. **Highly Confident**. Some doubt but we all feel it will be true
3. **Reasonably confident**. Our best guess at the time, but not surprised if it changed
4. **Low confidence**. If we have to guess! There are many factors that could prove us incorrect.

Lead Time

How long before we can prove or disprove?

When proven true or false?

- more work will be "finished'
- less time to undo any completed work that may be required.

Lead Time is rated on a scale of 1 to 2

1. proven or disproven within the **first half** of the project time.
2. proven or disproven within the **second half** of the project time

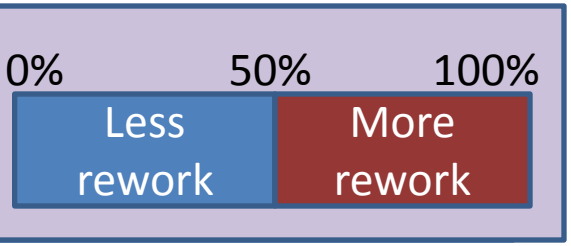
Impact

If the Assumption proves incorrect, how much rework is involved

Amount of rework that will need to be undertaken

1. Minimal Rework
2. Some Rework
3. Medium Rework
4. Significant Rework

Could also be schedule impact



PMI NNV Exercise

Assumption	Confidence	Lead Time	Impact	Total Score	Risk Mitigation