Top Challenges with Planning & Estimation

- Ambiguous/changing requirements are hard to estimate.
- Difficult to predict what exactly will be delivered when (unless psychic powers exist☺)
- Estimating takes too long and we still don't get it right.
- Estimates are provided by the wrong people (not the ones doing the actual work).
- Software projects are unique and ambiguous, hard to provide exact estimates.
- Business customers promise unrealistic deadlines then tell the team to make it work.
- Commitments are signed based on high level estimates.
- Fixed Scope, Time, Budget!
- 'Estimates' are expected to NOT Change.

The Problem with Traditional Estimation

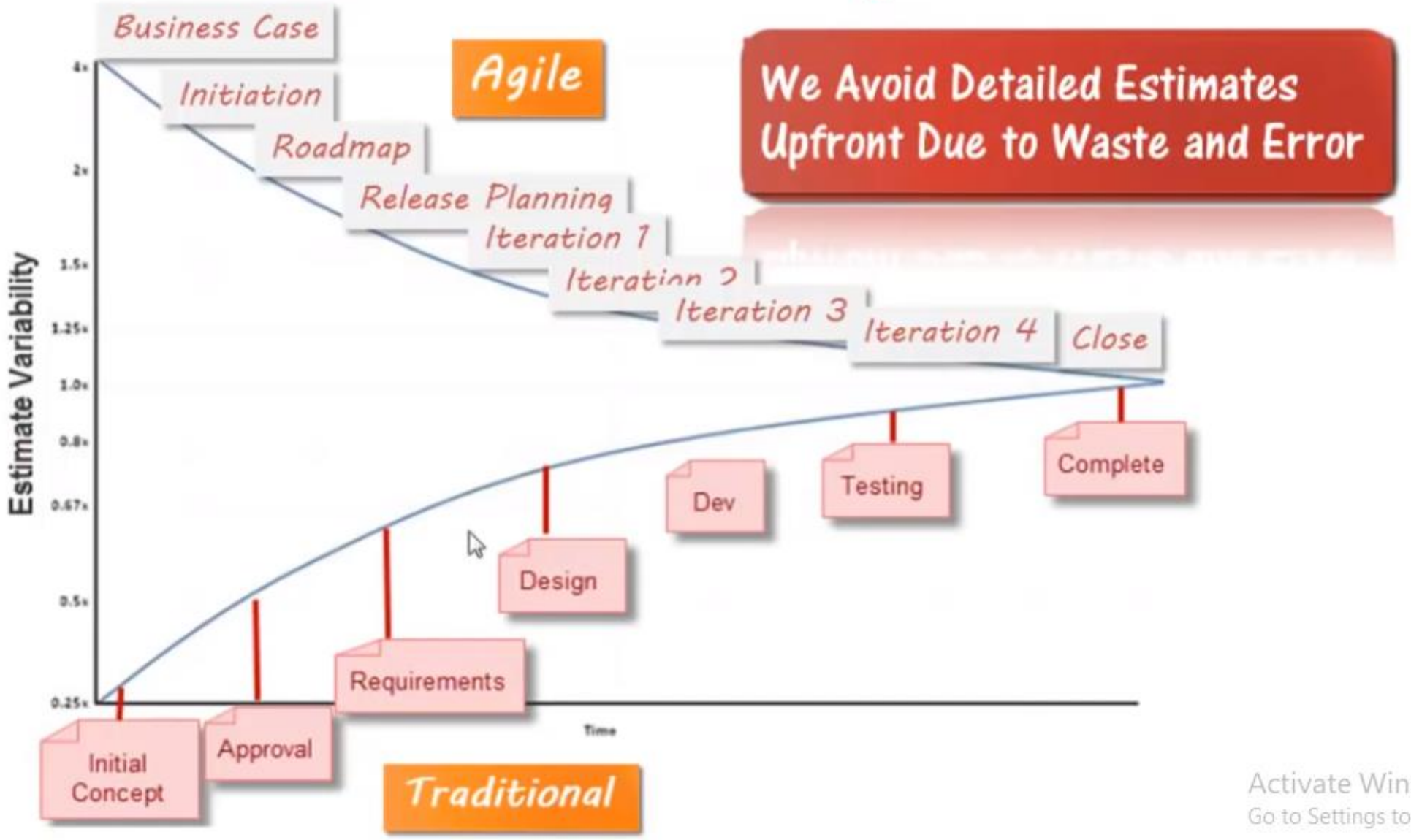
Traditional methods attempt to provide detailed **commitments** and estimates **when we know the least** about the project – at the start.

We're using estimation metrics (such as **hours and exact dates**) that were designed for precision – these should be used when ambiguity is low.

We make promises and dates without understanding the **scope and capacity** of our delivery.

We waste valuable time asking for **hour estimates** (that change) many times from the wrong people.

The Cone of Uncertainty



Get it Done MAGICALLY!

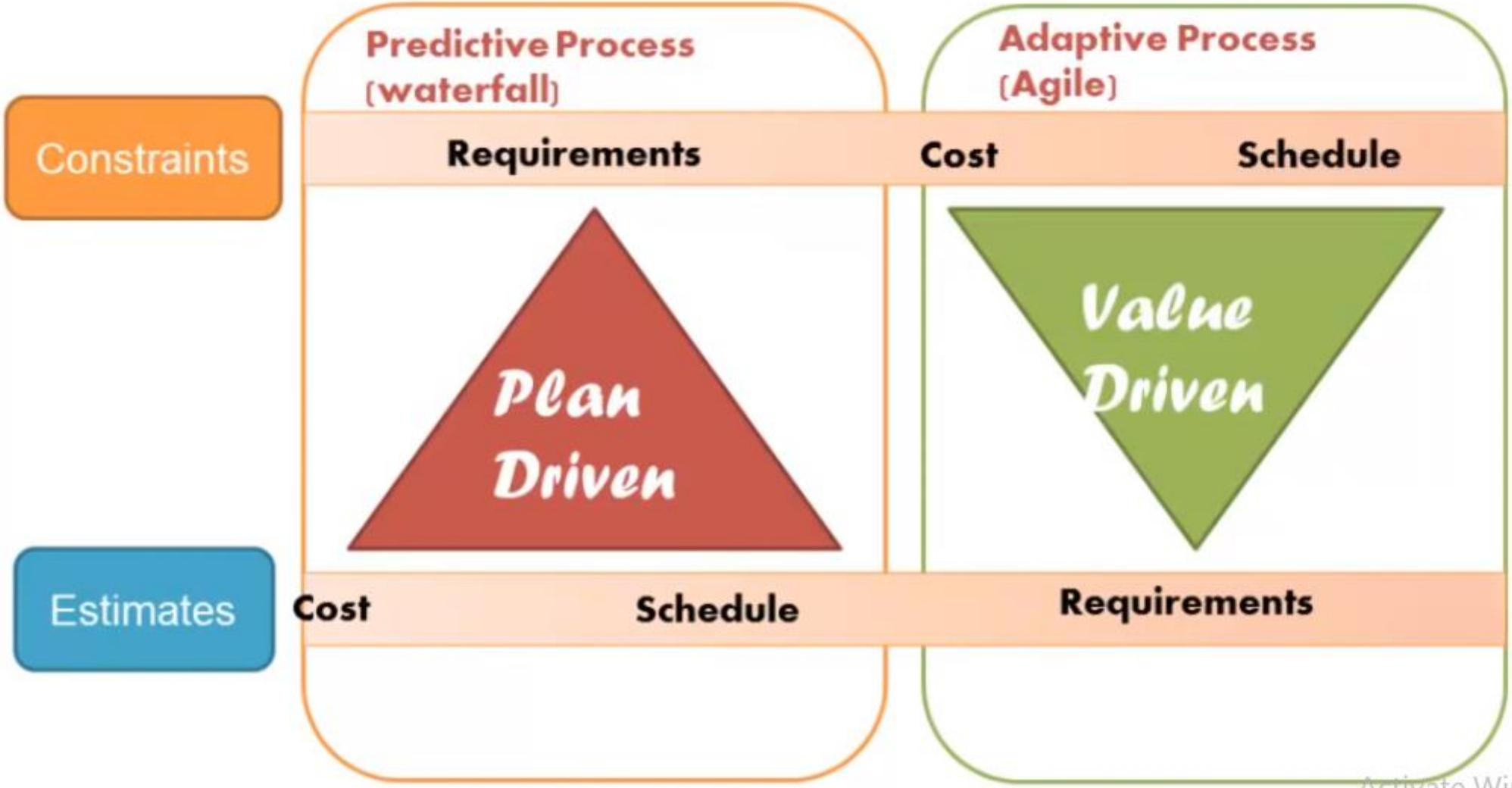
Marketing/Sales/Business promises deliverables
by a specific date for a specific scope

Periodically the team
provides realistic estimates
but are told that won't work
– GET IT DONE – Use MAGIC!

MAGIC is used = overtime hours,
stress, broken relationships, health
problems, high turnover, negative
team dynamics, low morale

Product is delivered using
MAGIC. Customer is happy.

Agile is Value Driven



Agile Planning & Estimating Principles

- Fix the Date and/or the Budget - Always Plan for Flexible Scope
- We Avoid Detailed Estimates Upfront Due to Waste and Error
- Estimates Evolve in Accuracy with Actual Velocity Data
- Estimate Size .. Measure Velocity .. Derive Duration/Points
- Provide a 'Range' for our Estimates
- Use the 'Right Sizing' Method for the 'Right Level'
- The TEAM Estimates Collaboratively and Periodically

= 2x

RELATIVE

ABSOLUTE

~~6 wks?~~
~~8 wks?~~
3 mths

AGILE
ESTIMATING

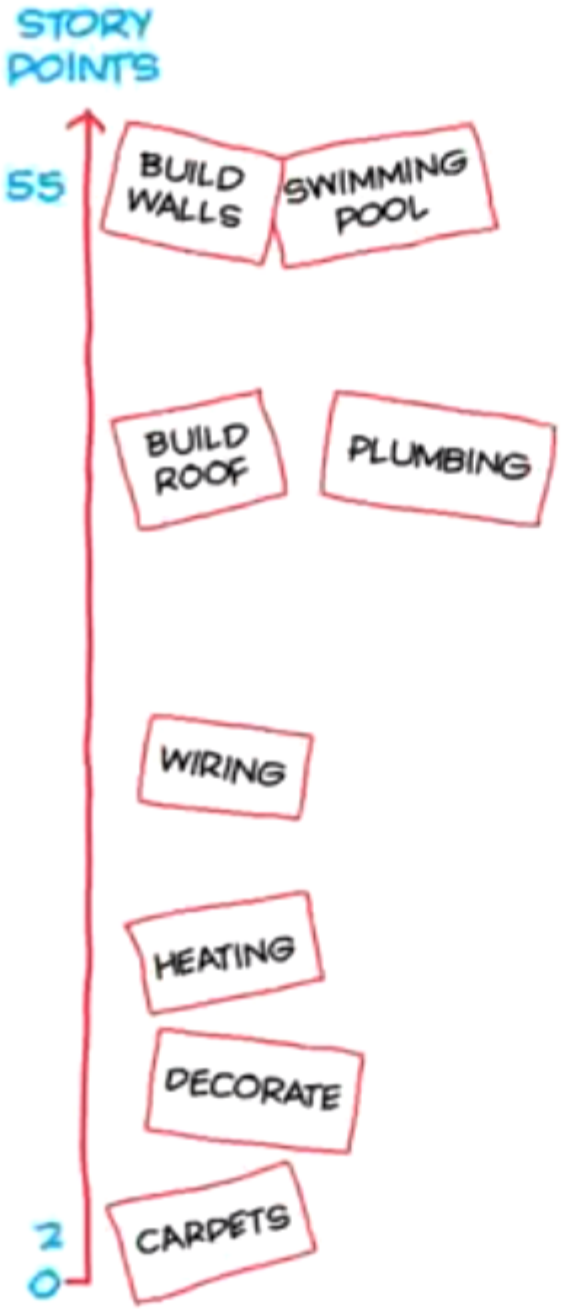
RELATIVE

ABSOLUT

AGILE ESTIMATING

STORY

POINTS



RELATIVE

ABSOLUT

AGILE
ESTIMATING

STORY

POINTS

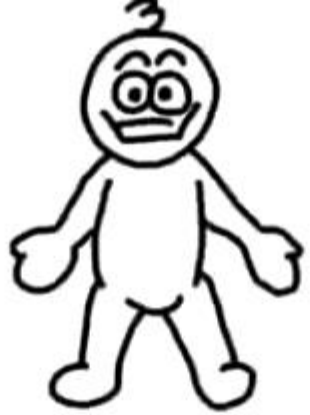
= 2x

RELATI

FIBONACCI SEQUENCE:

1, 1, 2, 3, 5, 8, ...

$$\frac{F(n+1)}{F(n)} = 1.618\ldots \Rightarrow 60\%\ \text{incr.}$$



AGILE
ESTIMATING

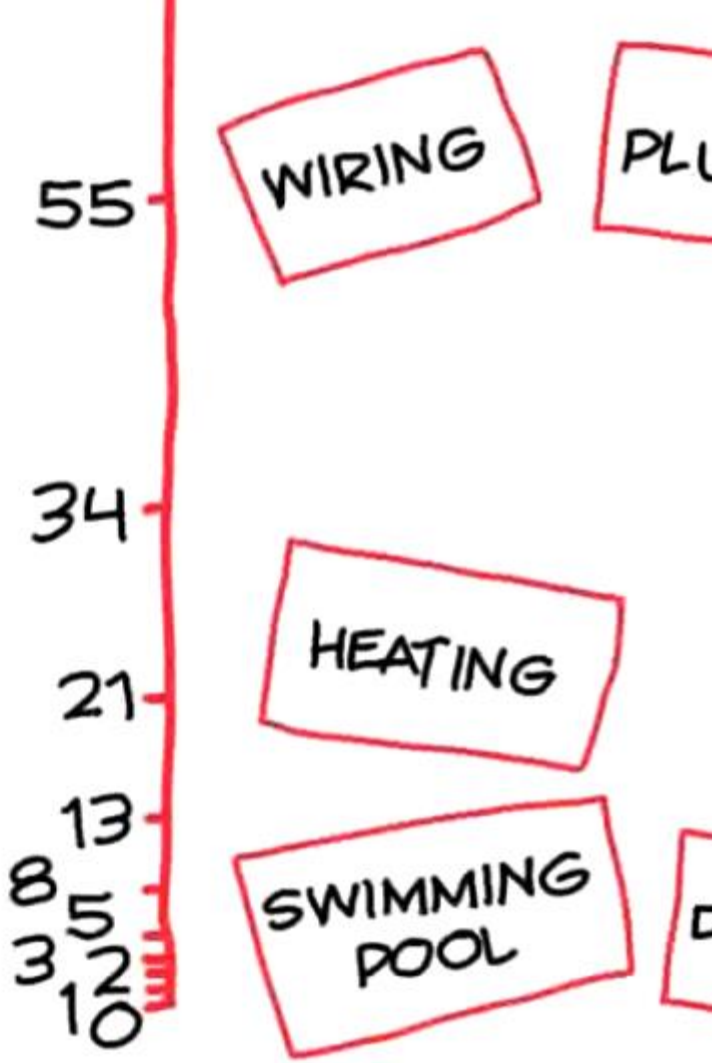
VALUE

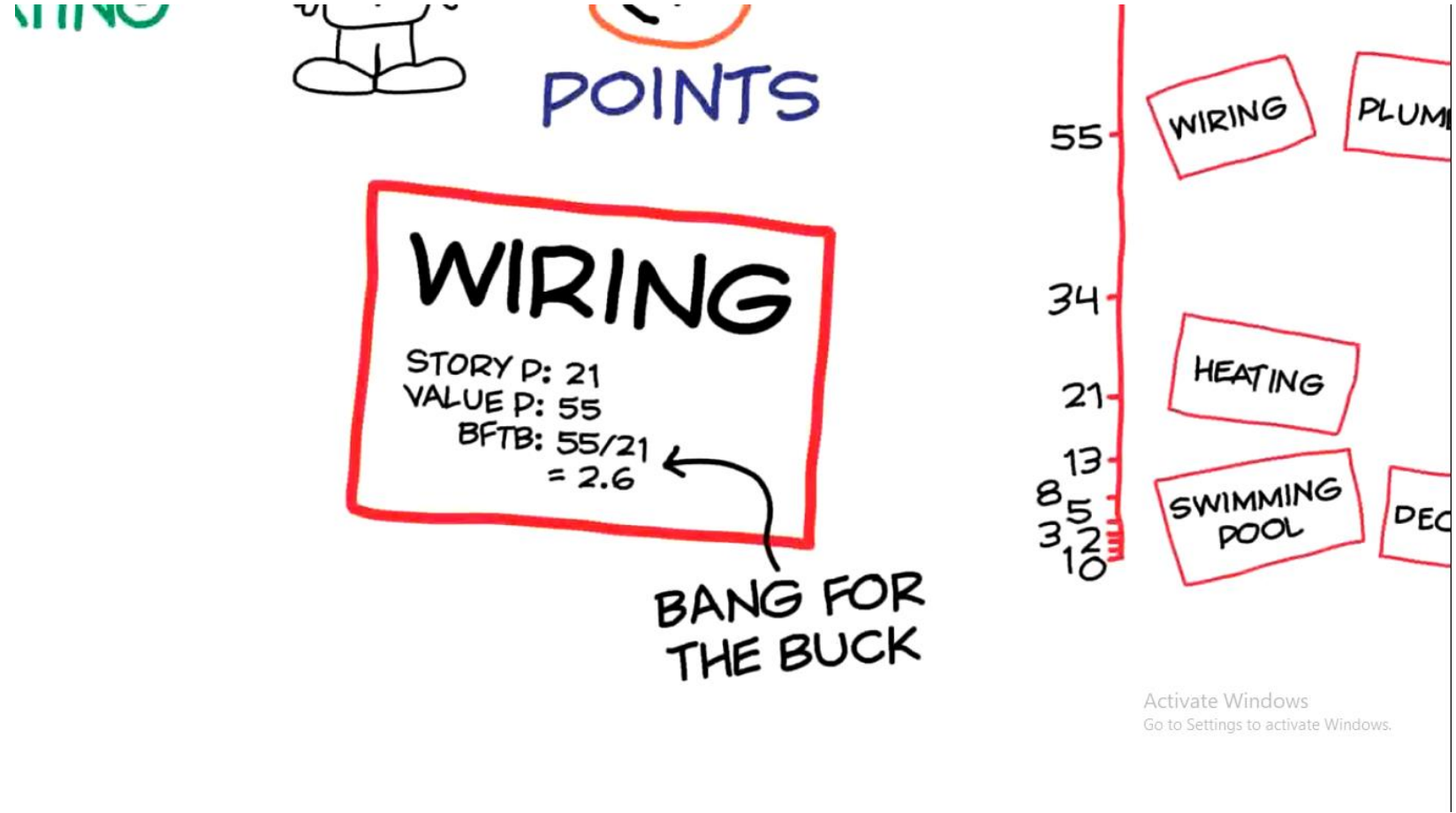
POINTS

POINTS

WIRING

STORY P: 21
VALUE P: 55





ESTIMATING

POIN

	STORY	VALUE	BFTB
BUILD ROOF	34	144	4.2
WIRING	21	55	2.6
BUILD WALLS	55	89	
HEATING	13	21	1.6
PLUMBING	34	55	
CARPETS	2	2	1
DECORATE	8	2	0.25
SWIMMING POOL	55	1	0.01

WIRIN

STORY P: 21
VALUE P: 55
BFTB: 55/21
= 2.6 ←

PLUMBING

WIRING

SW
P

VELOCITY: 55
VALUE: 89

ITERATION 1

BUILD WALLS

IG

SWIMMING POOL 55 1 0

VELOCITY: 55
VALUE: 89

ITERATION 1

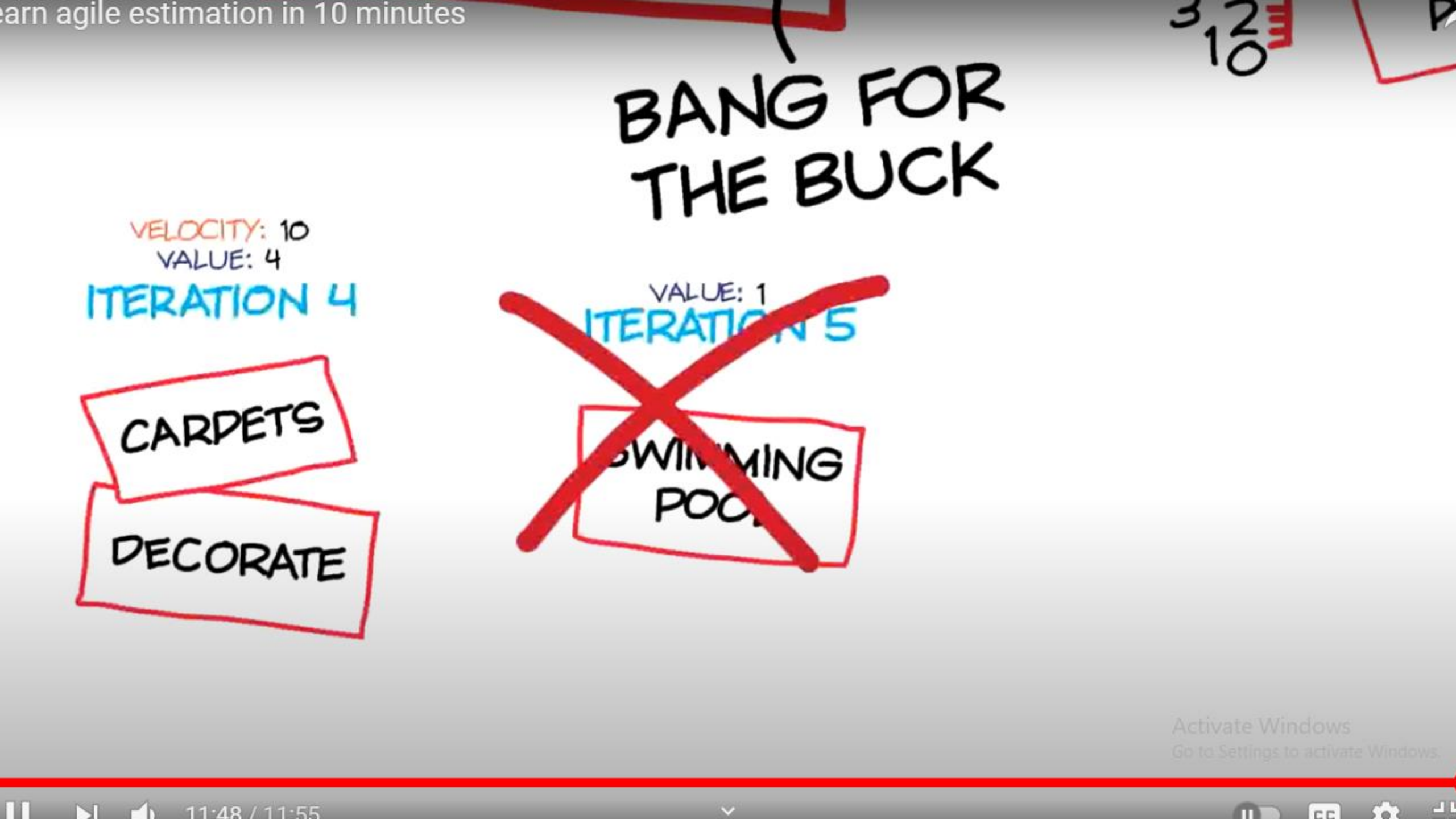
BUILD WALLS

VELOCITY: 55
VALUE: 199

ITERATION 2

BUILD ROOF

WIRING



- https://www.youtube.com/watch?v=Hwu438QSb_g
- https://www.youtube.com/watch?v=jaqiXSp-D8E