

منتدى دبي العالمي  
لإدارة المشاريع

DUBAI INTERNATIONAL  
PROJECT MANAGEMENT FORUM  
5<sup>th</sup> EDITION

الدورة الخامسة  
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## PARALLEL SESSION STREAM

AI and Project Management:  
Best of Human/Machine

# BUILDING NATIONS

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**UNCERTAINTY**



**Innovation**



**Disruption**

# Project Management Failure Patterns!



**Status**  
G-G-G-G-  
RED!



**Whack-a-Mole**  
Shuffling  
resources  
to fight fires



**Game of Chicken**  
Waiting for other  
team's to fail first

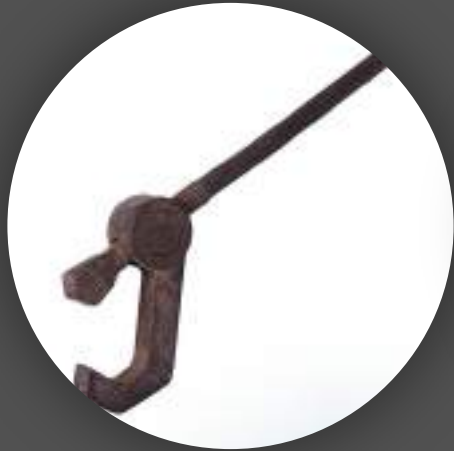


**Unsustainable**  
no end in sight

# Agenda

1. Humans Create Tools
2. What about AI?
3. 1960's Game Show
4. Losing at Chess
5. Navigation and Forecasting Arrival
6. AI for Next-Gen Project Management

# Industrial Tools – Help us Move Better







***45kph***

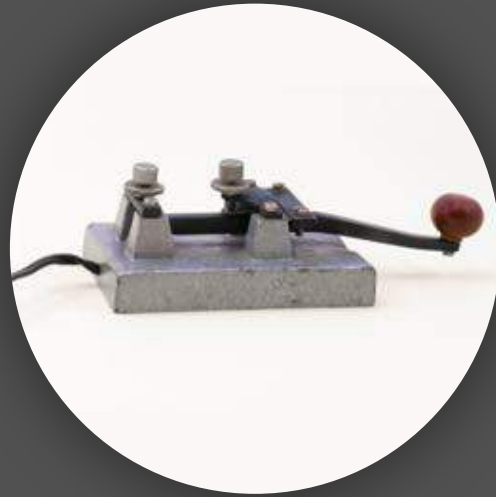


***120kph***



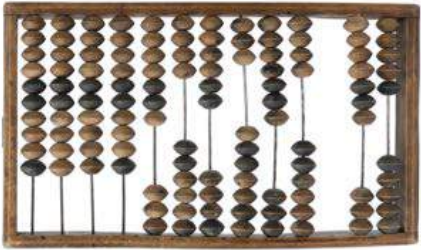
***129kph***

# Communication Tools



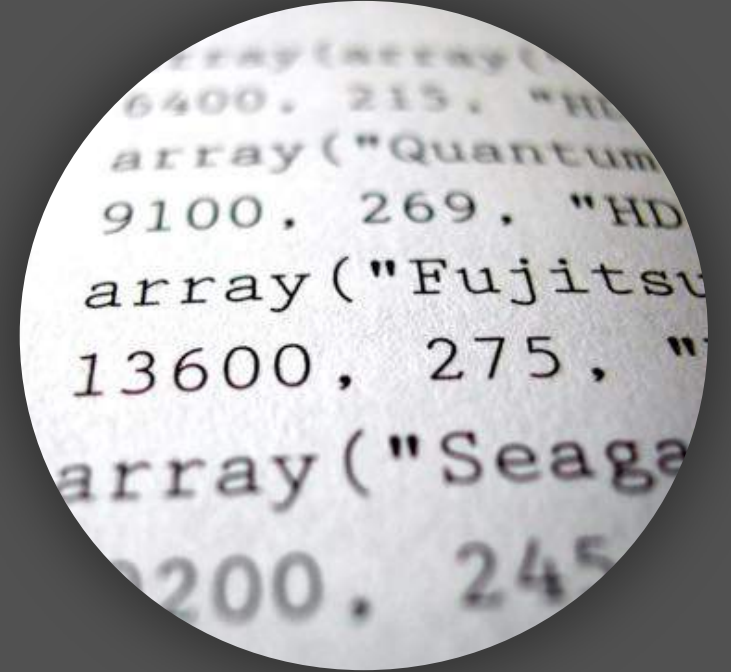


# Thinking Tools



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6400, 215, "H
array("Quantum
9100, 269, "HD
array("Fujitsu
13600, 275, "
array("Seaga
200, 245
```

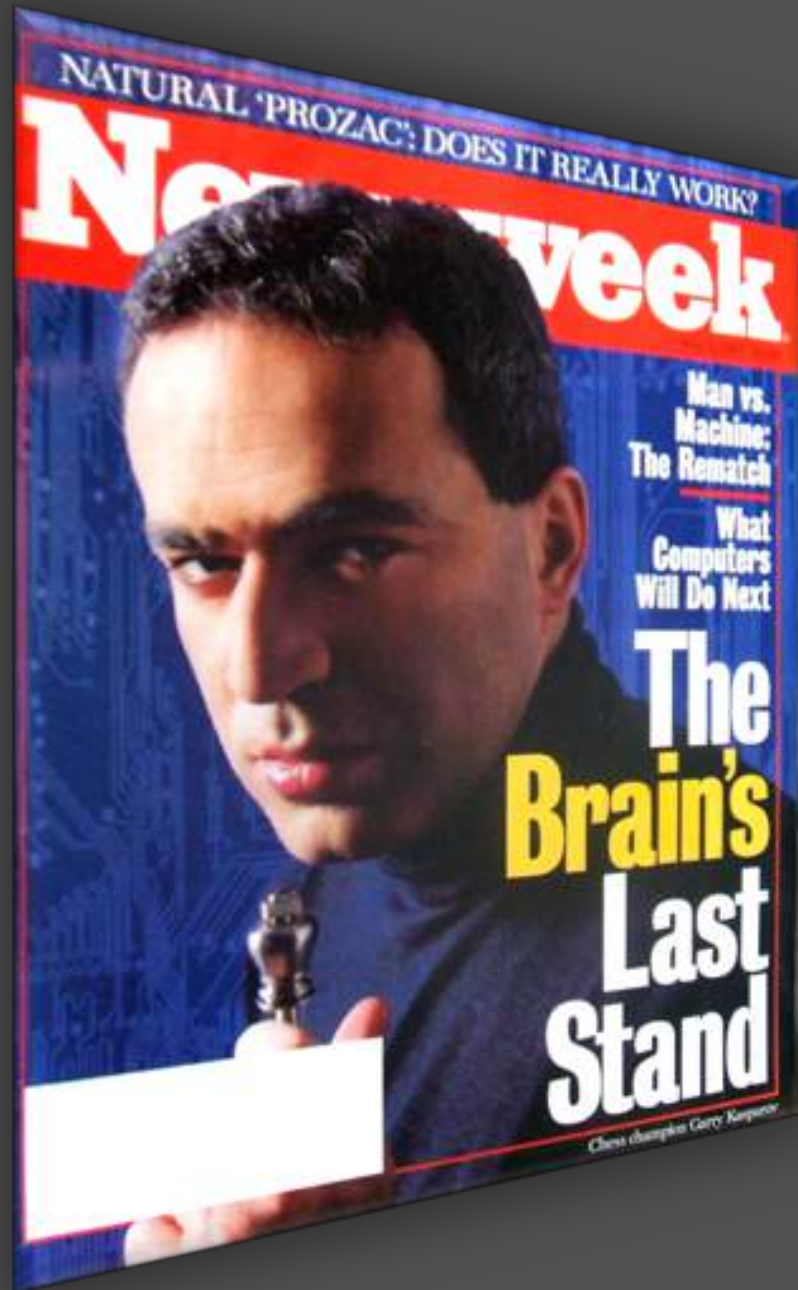
	A
1	
2	
3	
4	
5	
6	
7	



# What about AI?



1997



1997





2007



## 1960's U.S. Game Show *Let's Make a Deal*



**1/3**  
**Chance**

**=**



1/3 50/50 Odds?

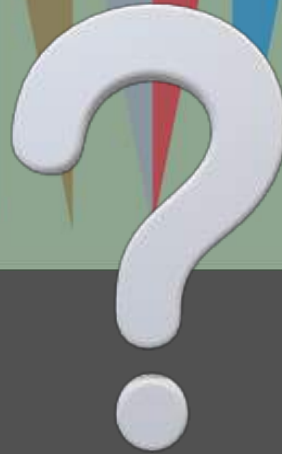
2/3

0/3

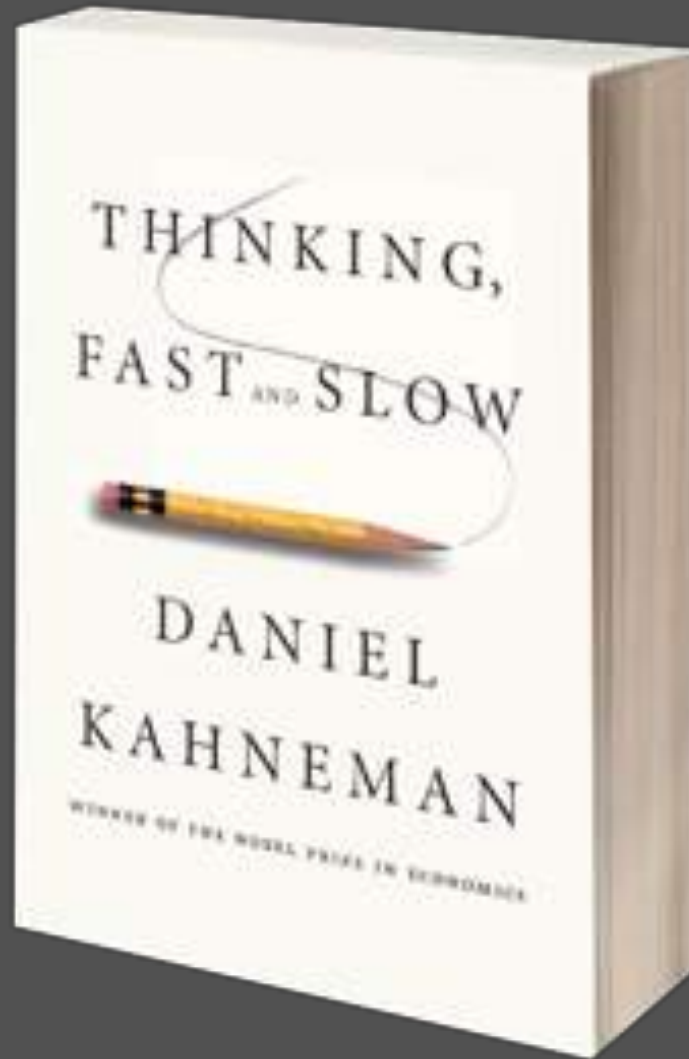
1

2

3







**“Even statisticians were not good intuitive statisticians.”**

*Thinking, Fast and Slow*

**If only three doors can  
mess with our intuition...**



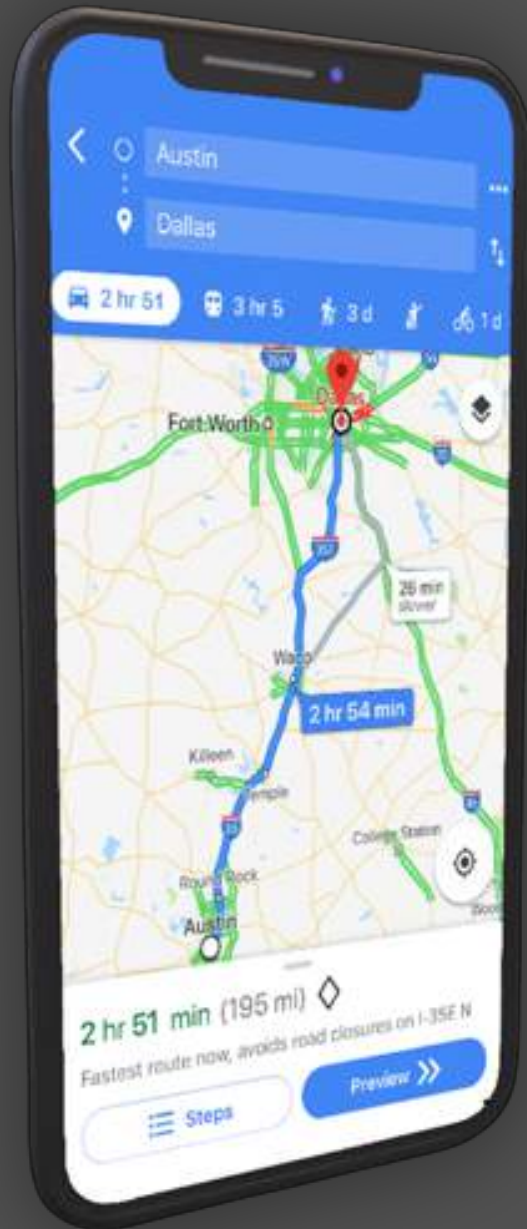
**WINNER**



**WINNER**

AI can be a Thinking Tool...  
That helps us think better.





# Forecasting Arrival Time

*02:51:00*



Austin

Waco

Dallas

02:51

80% Confidence



00:00

01:00

02:00

03:00

04:00

05:00

Austin

Waco

Dallas

**02:49**

80% Confidence



00:00

01:00

02:00

03:00

04:00

05:00



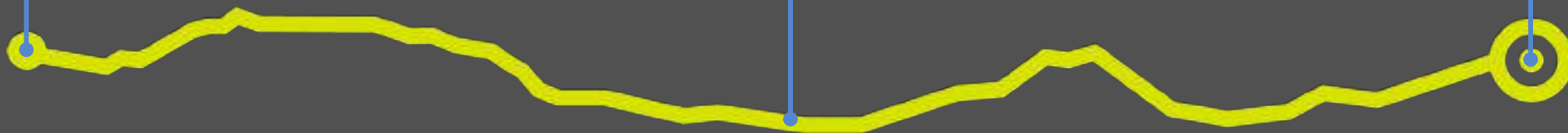
Austin



Waco

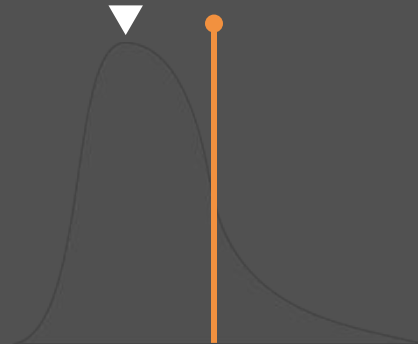


Dallas



02:51

80% Confidence



00:00

01:00

02:00

03:00

04:00

05:00

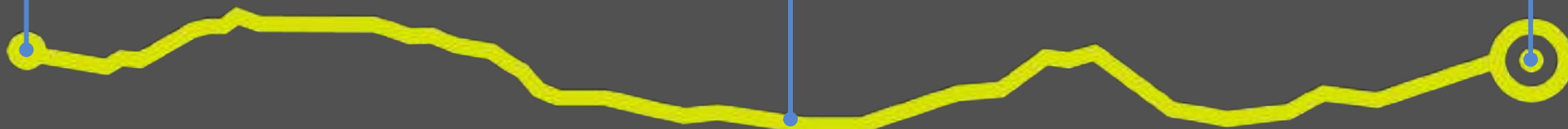
Austin



Waco

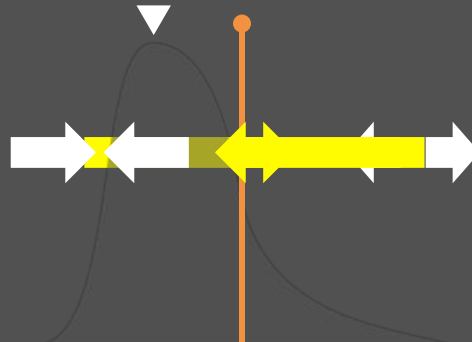


Dallas



02:51

80% Confidence



00:00

01:00

02:00

03:00

04:00

05:00





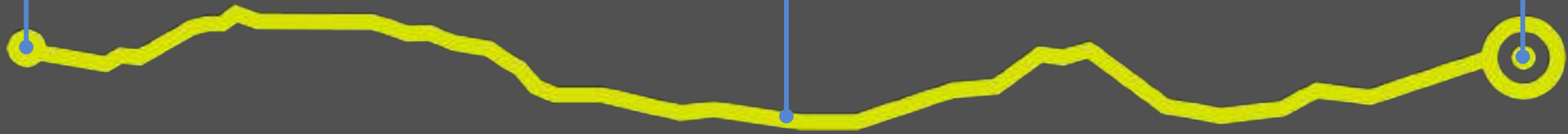
Austin



Waco



Dallas



Front Load Risks



00:00

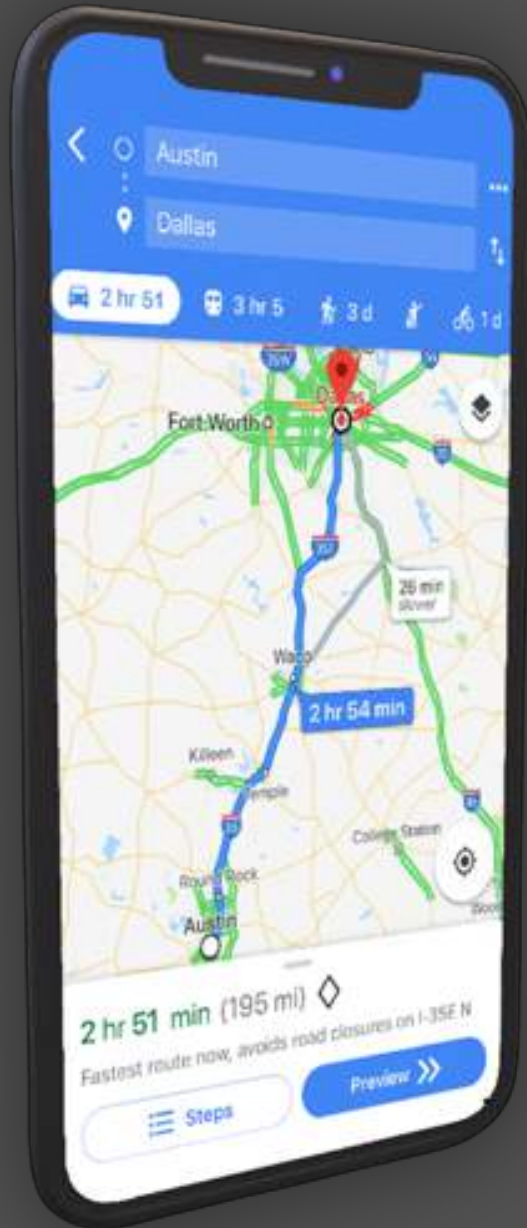
01:00

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## Forecasting Arrival Time

- Confidence
- Real-time

# AI for Next-Gen Project Management

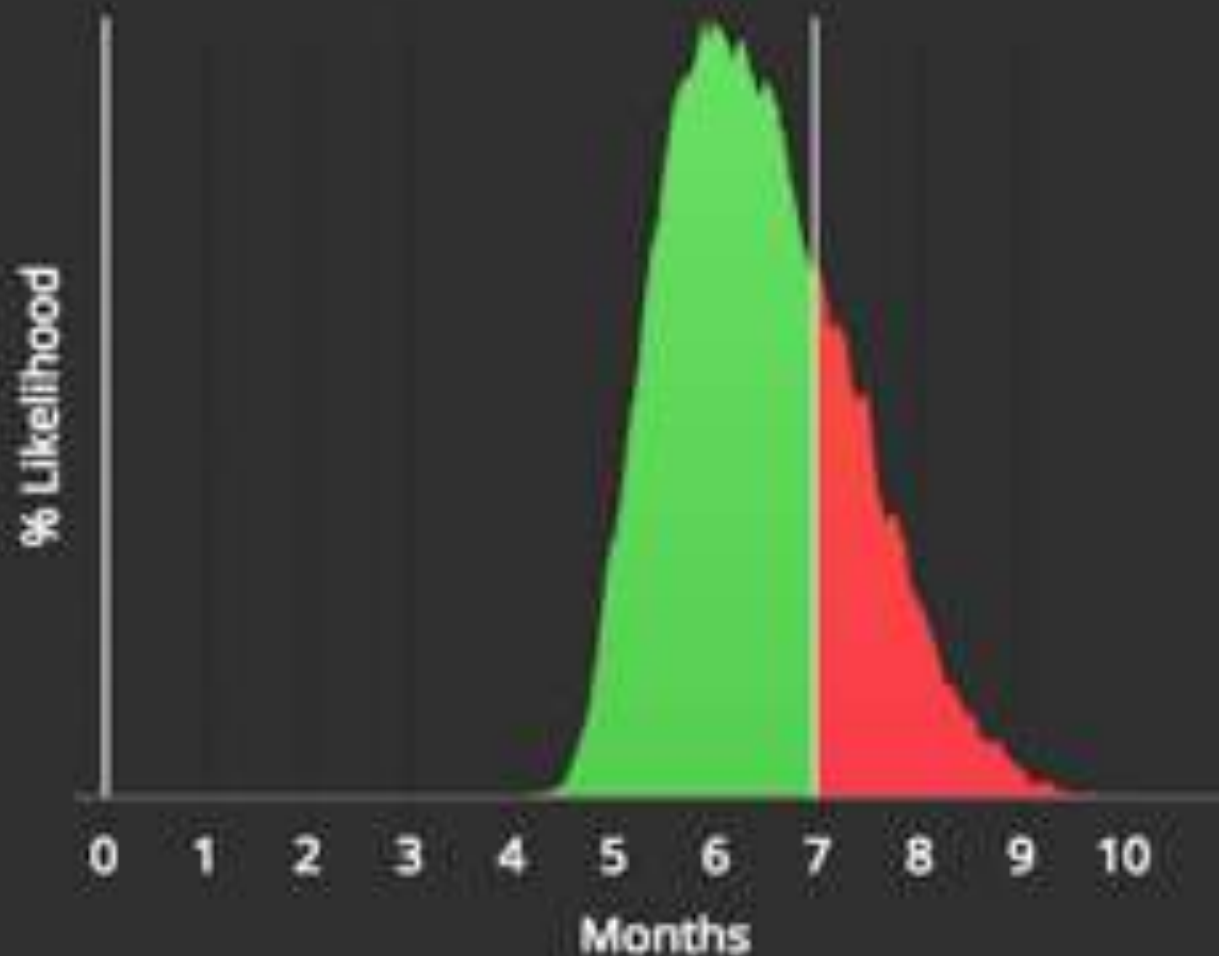
- Measure Uncertainty and Risk
- See Problems Months Ahead of Time
- Tune plans to target risk tolerance
- Act with Confidence

# Will we finish on time?

MONTHS  
0 of 7

ON-TIME/EARLY  
74 %

LATE  
26 %



Likelihood of  
completing by:  
MONTH

6	36%
7	74%
8	94%
9	100%

Codename: Phoenix  
Duration: 8 months  
Size: 2 person team  
Capacity: 15-22 ideal days/m

Feature A 45  
Feature B 25-30  
Feature C 40  
Comp 1 ?  
Comp 2 30  
Integration A 30 \*risky!  
Integration B 40

Aptage PERF Engineering.xlsx

Upload My Spr

Overall Project Risk: ●

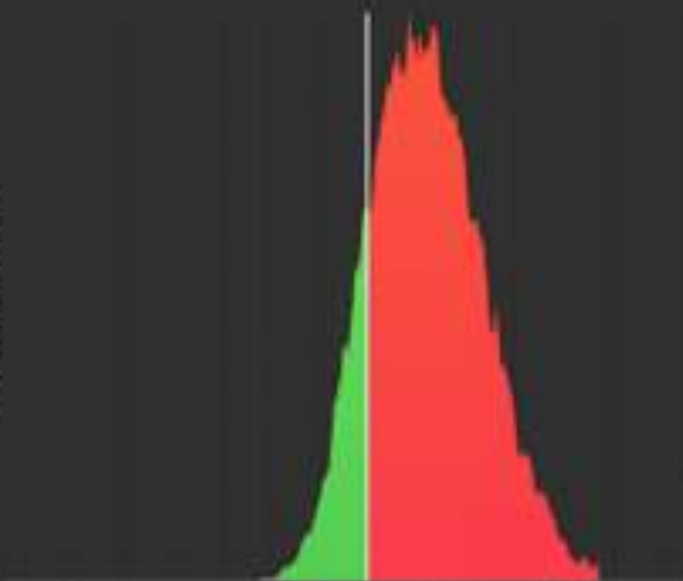
Will we finish on time?

MONTHS  
0 of 8

ON-TIME/EARLY  
● 16 %

LATE  
● 84 %

% Likelihood



1 2 3 4 5 6 7 8 9 10 11 12 13 14

Months

Likelihood of  
completing by:  
MONTH

8 16%

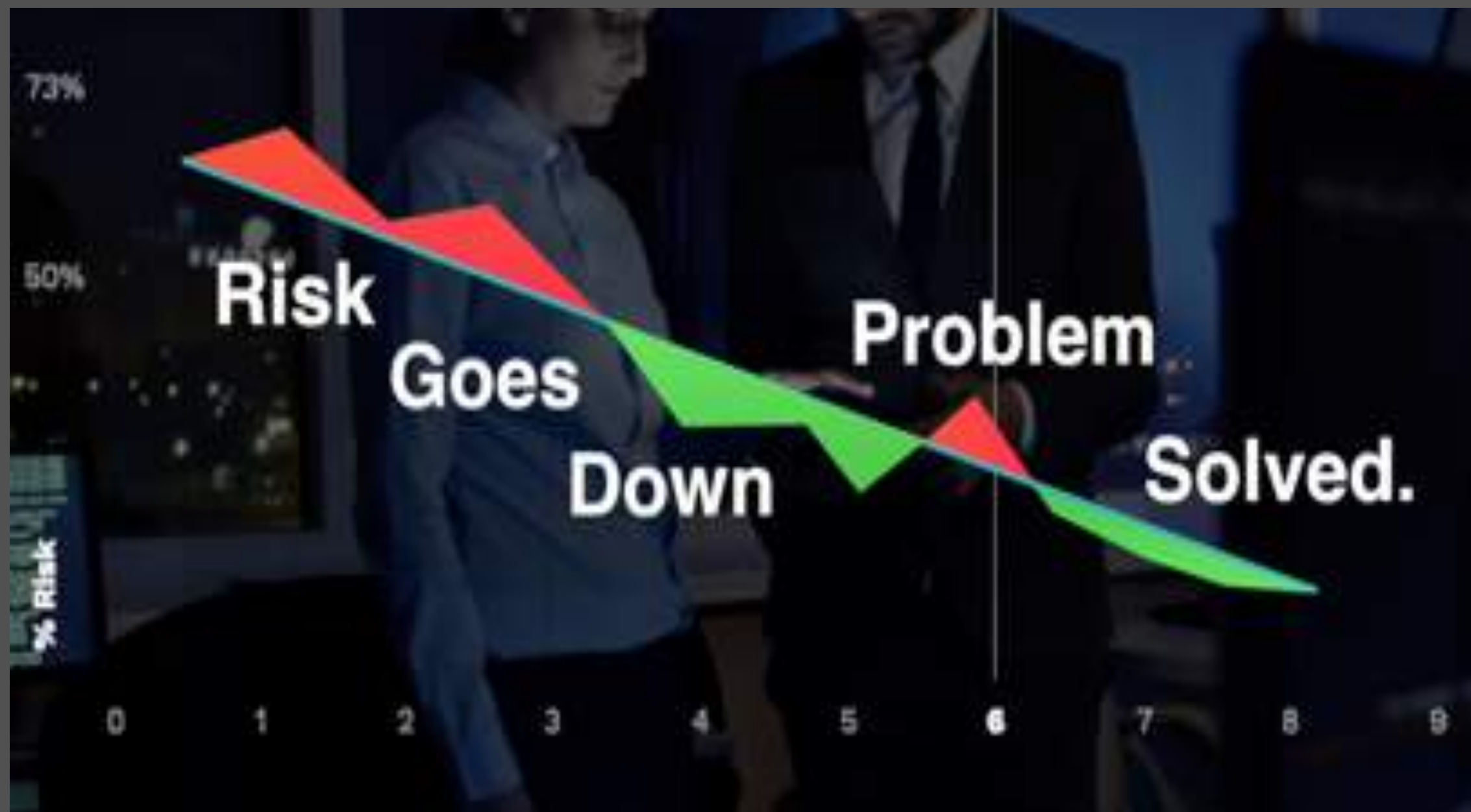
9 46%

10 76%

11 93%

12 99%

13 100%

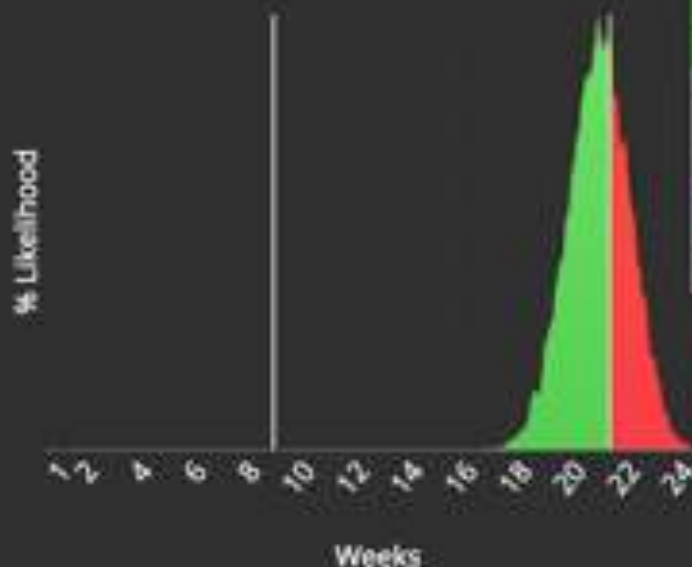




Overall Project Risk: ●

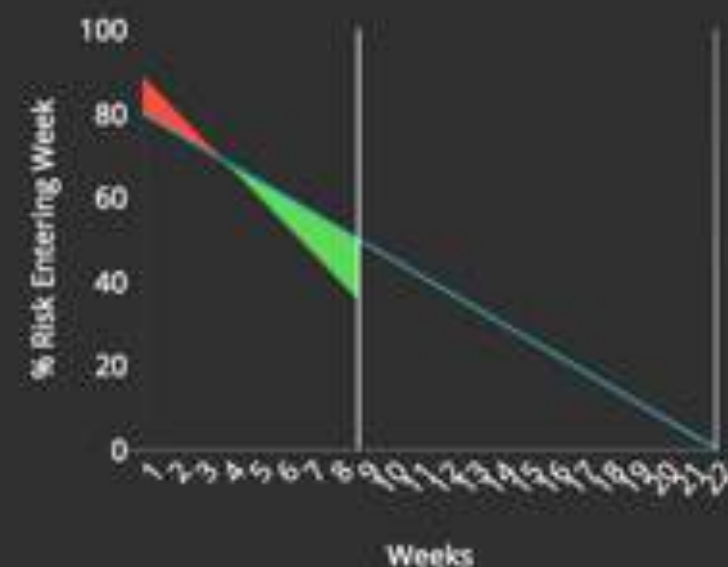
Will we finish on time?

WEEKS 8.8 of 21.2  
ON-TIME/EARLY ● 65 %  
LATE ● 35 %



Are we managing our risk?

OVERALL HEALTH ● Good  
WEEKS 8.8 of 21.2  
Ideal ● Manageable ● Too risky



Task	Start	End	Duration	Progress
-125 Anystreet	0 days			
-Prepare site	0 days			
Excavation	0 days			
Utility Connection	0 days			
Site Preparation	1 day			
-Foundation	0 days			
Buildings, Rebar	0 days			
Lay Concrete	2 days			
curing	1 wk			
Foundation Complete	0 days			
-Floor 1	0 days			
Framing	0 days			
Electrical	0 days			
Plumbing	0 days			
Finishing	0 days			
Painting	4 days			
Floor 1 Complete	0 days			
-Floor 2	0 days			
Framing	0 days			
Electrical	0 days			
Plumbing	0 days			
Finishing	0 days			

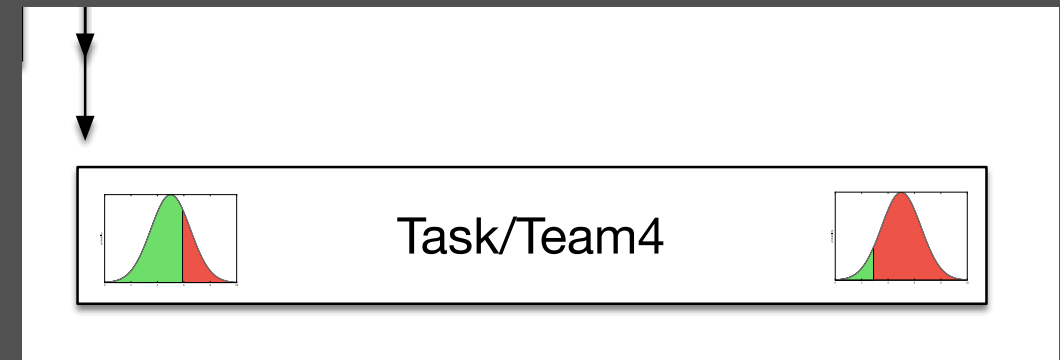


# Seeing the Future

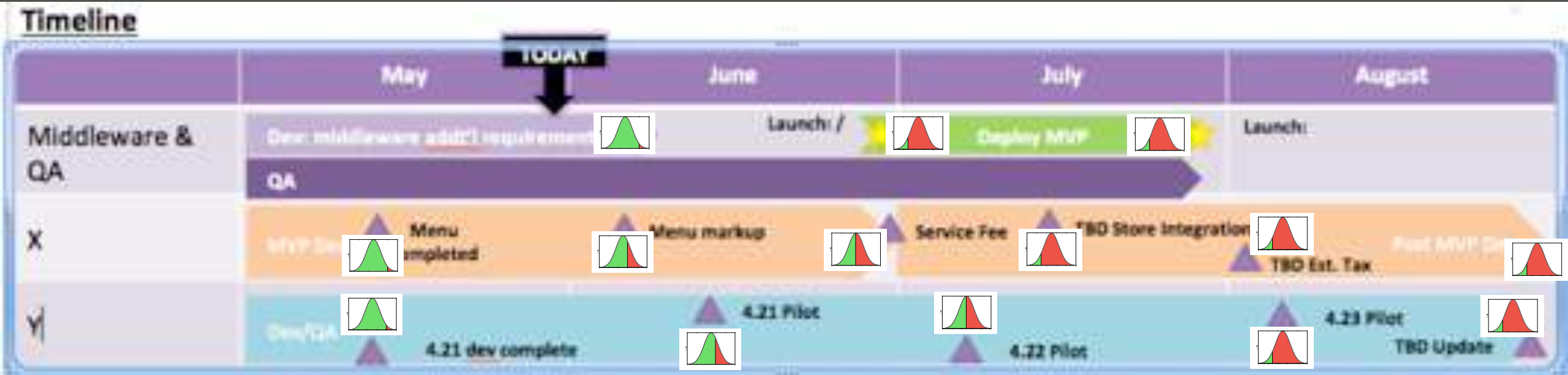
Learning Team4 is going slower than planned:



Team4 is adding future risk



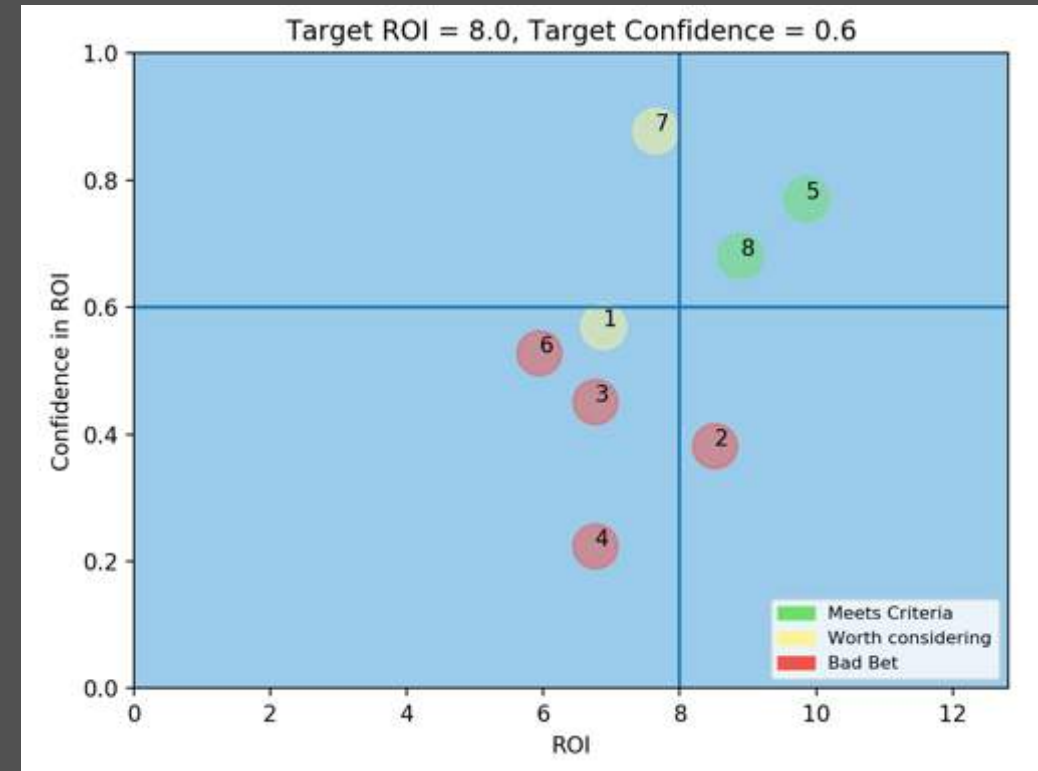
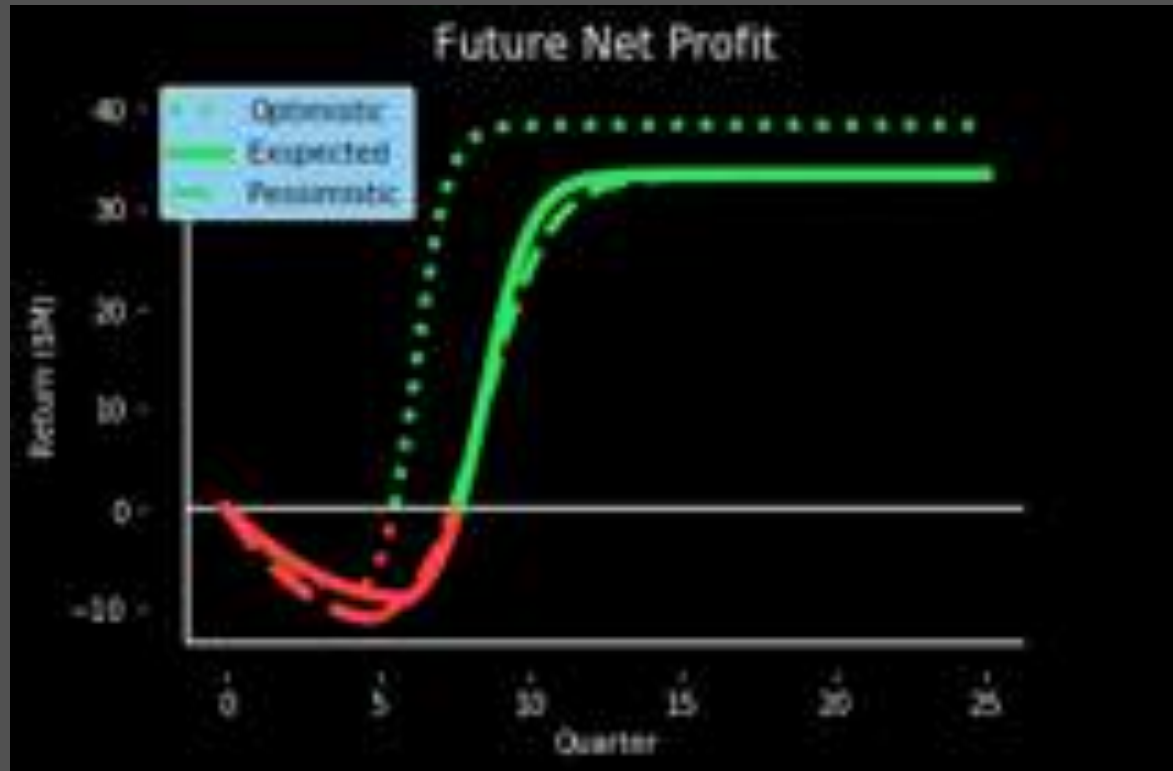
# Hybrid Programs with Risk Analysis



# Portfolio Management

J-Curves, S-Curves

Uncertainty of ROI and TCO



# Thank You

1. Our Intuition is not good at complex uncertainty
2. AI is a Thinking Tool, that helps us Think Better
3. Humans and Machines, not Humans vs Machines
4. AI for Next-Gen Project Management

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