

DARK MATTER PLANNING

A Kanban Technique



Joshua Rowell

Agile Coach & Gamer



@JRowelTech



TULSA CHAPTER

WHY DO WE PLAN?

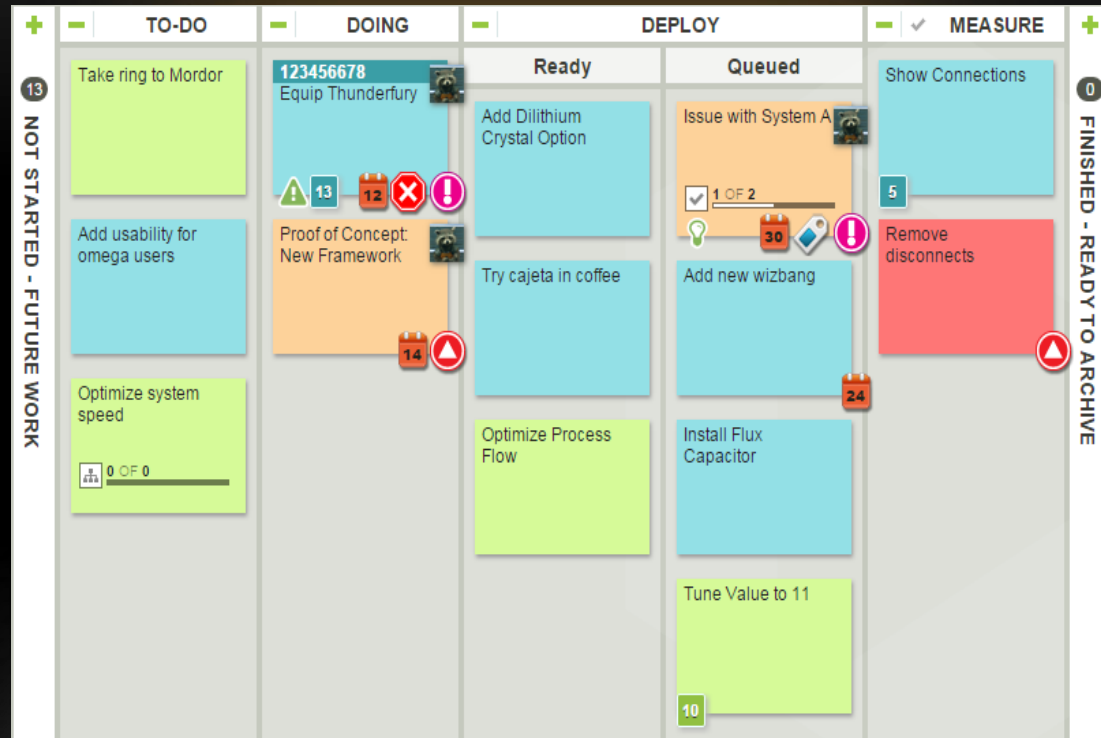
To Reach A Goal

Cope With
Or Control
Uncertainties



Kanban

- Visualize Workflow
- Limit Work in Process
- Manage Flow
- Make Process Policies Explicit
- Improve Collaboratively

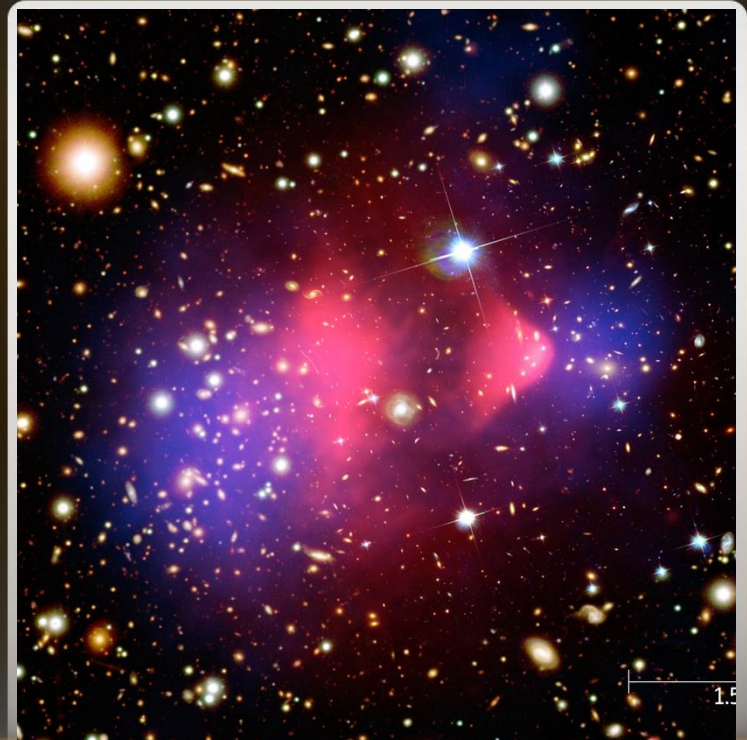


STOP STARTING
START FINISHING

Dark Matter

Dark matter is the name we give to matter we can not observe directly.

“The space between the stars.”



HOW DO YOU MEASURE
WHAT YOU CAN'T SEE?

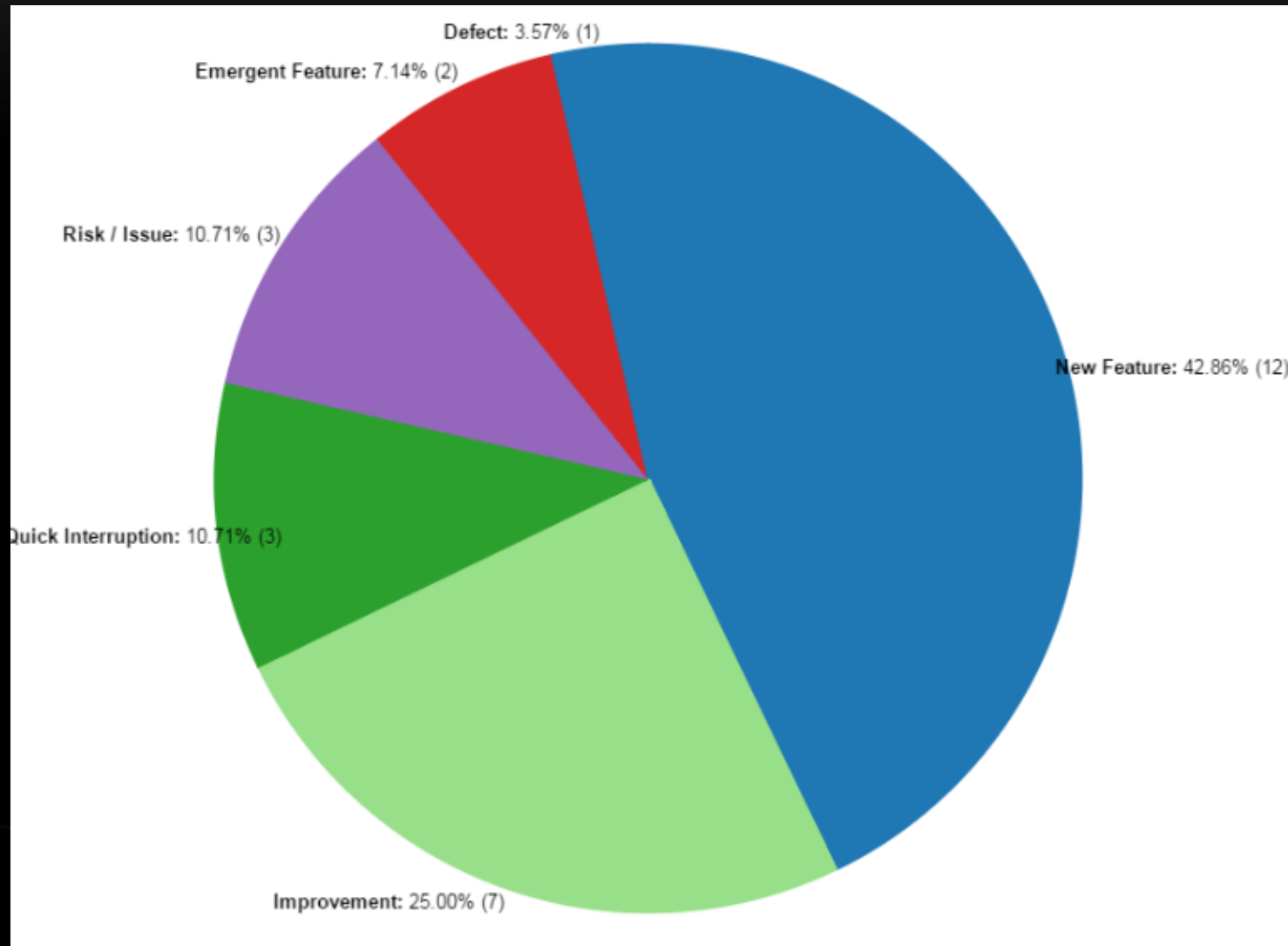


OBSERVE AND MEASURE WHAT YOU CAN



photo credit: Two black holes collide. University of Glasgow

TRACK THE UNKNOWN



TRACK KEY METRICS

- **Throughput:** The average throughput of the development process per unit time
 - **WIP:** The average number of work items in progress
 - **CYCLE/LEAD TIME:** The average time a work item spends in development as WIP
-

DO THE MATH

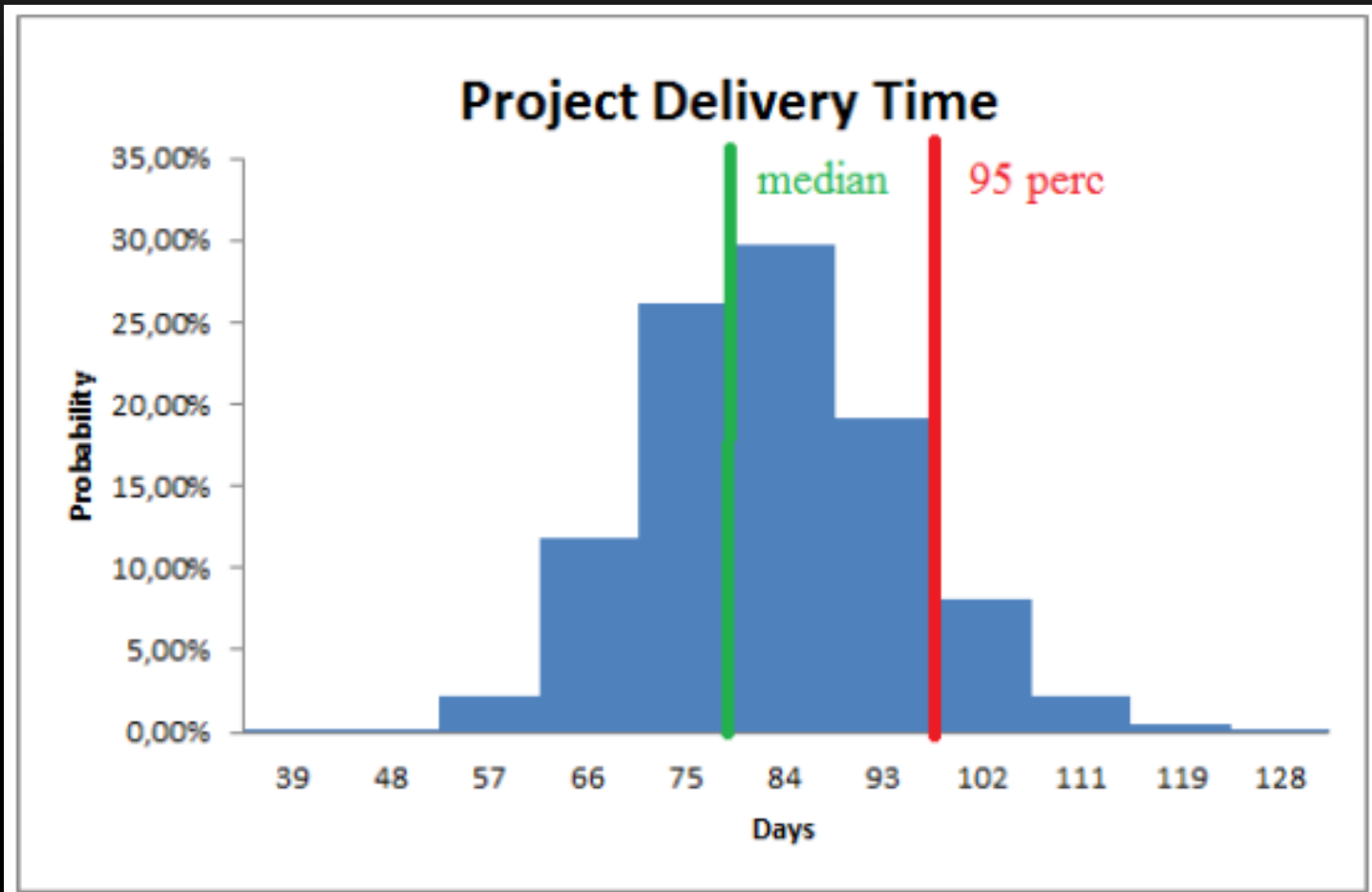
- $N = (1 + FL + DM)N_p$
- N_p = Number of Planned Items*
- DM = Dark Matter
- FL = Failure Load

* Use Randomized Branch Sampling

FINISH THE MATH...

- $T = N(LT_t / WIP_t)$
- N = Number of Items
- LT_t = Average Lead Time
- WIP_t = Average WIP

THE RESULT



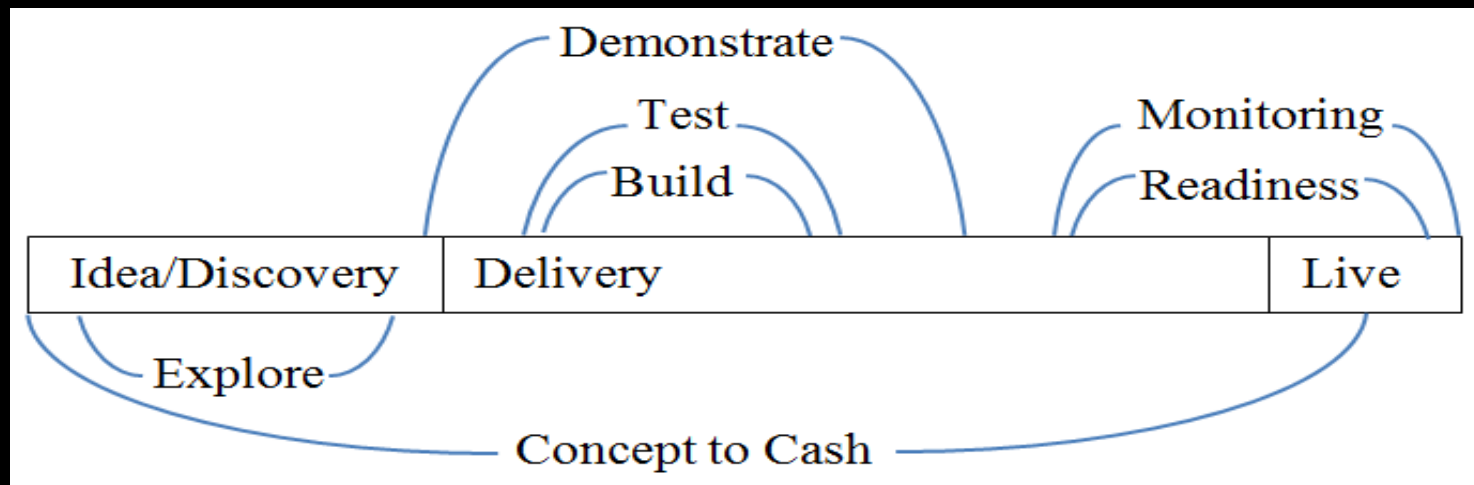
WE VALUE...

Responding to change
over following a plan

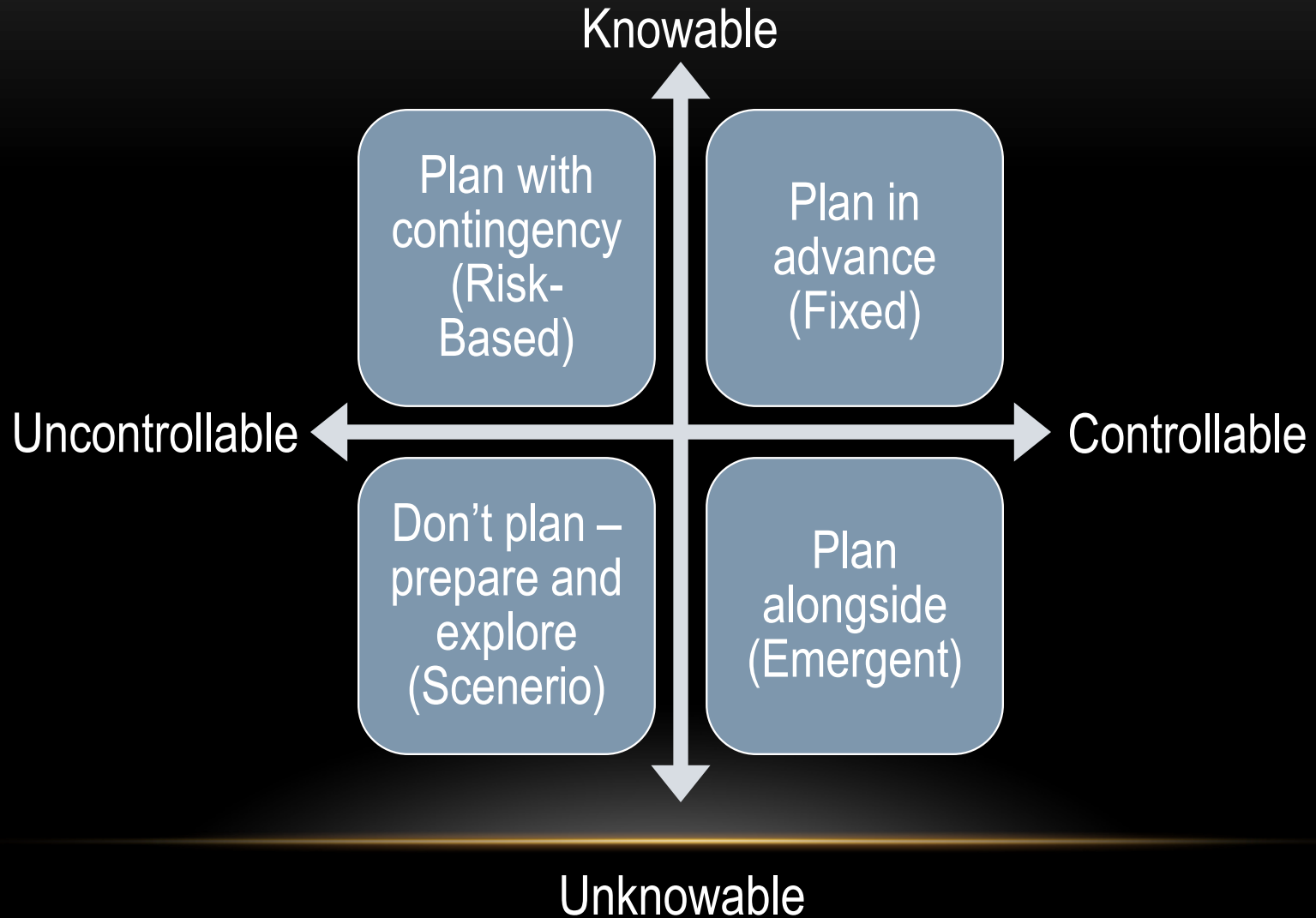
Feedback Loops

Examples:

7 Cadences of Kanban, Scrum Ceremonies,
XP Feedback/Planning Loops



PLANNING MODEL



WHAT CAN YOU DO NOW?

- Start Measuring
 - Cycle Time
 - Lead Time
 - Throughput
 - Work in Process
 - Start Tracking the Unknown
 - Failure Load
 - Emergent Features
 - Scope Creep
 - Interruptions
-

QUESTIONS



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REFERENCES

- **Anderson, DJ.** 2012. *Kanban At Scale*. LKU
- **Bakardzhie, Dimitar.** 2015. *Probabilistic Project Planning*. InfoQ
- **Agile Manifesto,** 2001. *Principles behind the Agile Manifesto*. [online]
- **Linden-Reed, Janice.** 2015. *Kanban Cadences & Information Flow*. LKU
- **Scrum Guides.** 2014. *Scrum Guide: Events*. Scrum.org, ScrumInc.
- **Emergn Ltd.** 2015. *Planning Flow*. www.valueflowquality.com