

Saving More Than Just Deadlines

How Disciplined Schedule Management
Changed a Project's Culture



First Things to Know

1. USDA Headquarters is HUGE!
 - 6 Floors, 7 Wings, 2 Basement Levels
 - 15 Agencies



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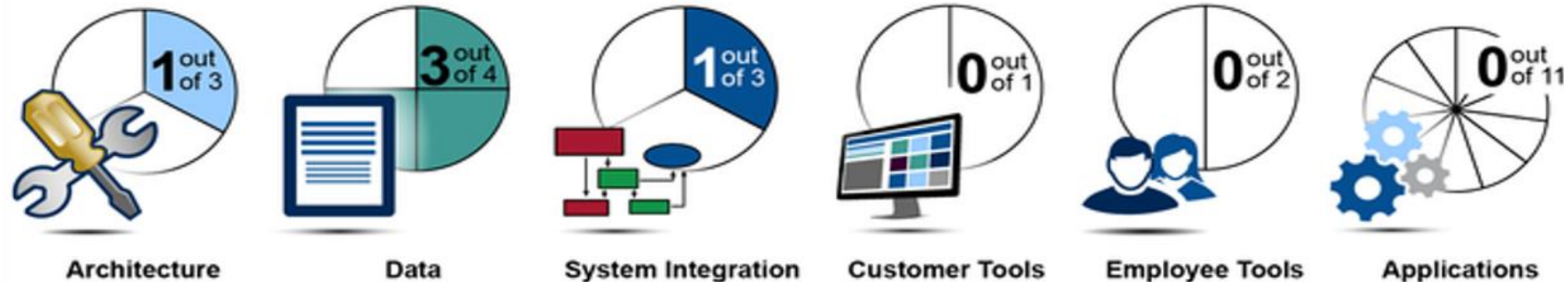
First Things to Know

2. Feds at USDA **Love** their Job



MIDAS Project Goals 2004 – 2015

- ✗ Modernize IT Systems
- ✗ Better Software for:
 - ✗ County Offices (Government Employees)
 - ✗ Customers (i.e., American Farmers)



Source: GAO analysis based on Farm Service Agency data. | GAO-15-506

Agenda

First Things to Know	✓
Background	5 m
Initial Assessment & Plan of Action	5 m
Implementation <ul style="list-style-type: none">• Challenges• Success Factors• Persuasion	10 m
Results	5 m
Takeaways and Questions	10 m

Background

Project

- Started 2004
- IT Modernization Effort
- Run as “Hybrid Agile”
- New PMO in 2015

Team Culture

- Very Customer Focused
- Developers Separated from PMO
- “Atmosphere of ‘us versus them’” * 



Source: Apple Maps

* USDA Office of the Inspector General, Review of Farm Service Agency's Initiative to Modernize and Innovate the Delivery of Agricultural Systems (MIDAS). May 2015. (<https://www.usda.gov/sites/default/files/03501-0001-12.pdf>)

What is Agile?

- ...

What is Agile?

- Fixed Recurring Schedule: Two Week “Sprints”
- Variable Scope: Requirements ≈ “User Stories”
- Good for Projects with Volatile Requirements and Low Operational Costs
 - ✗ Construction, Manufacturing
 - ✓ Software Development, Architectural Design
- Project Controls are Different, but Do Exist
- **USDA (2015): Exempt from Earned Value Management**

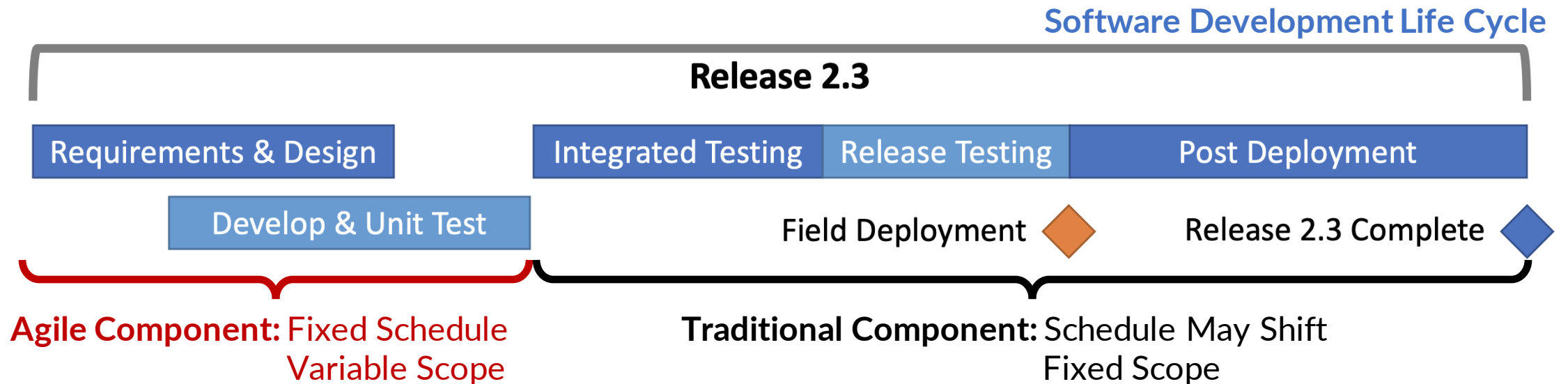
Background: MIDAS's Hybrid Agile

What

- Combines Agile with Traditional Software Development

Why

- Maximum Flexibility
- Minimum Oversight



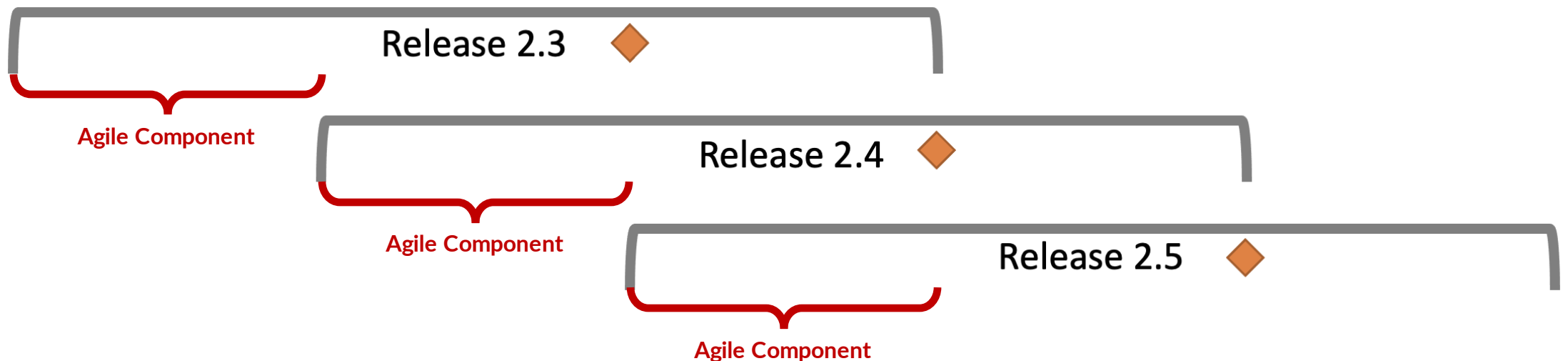
Background: MIDAS's Hybrid Agile

What

- Overlapping Development Cycles

Why

- More Frequent Deployments
- Continuous Development (Less Idle Time)



Background: Audit Findings

“We have previously reported on FSA’s shortfalls and made recommendations to address them.”

“FSA did not update its baseline cost, schedule, and scope plans from March 2012 to October 2014, even though it made significant decisions affecting scope and schedule.”

“FSA did not adequately implement key program management disciplines on MIDAS and lacks the capacity to effectively manage successor programs.”

Background: “Us Versus Them”

MIDAS Leadership Felt FSA

- Was too Controlling
- Didn't Understand Software Development

“Why don't you give us a pile of money, and we tell you what we did with it.”
- MIDAS Team Lead During Release Planning

FSA Leadership Needed

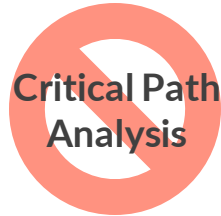
- Ability to Control Projects
- Baselined MIDAS Schedule
- MIDAS to Predictably Deliver
- Respectable ROI



Initial Assessment

Schedule & Process

- Missing Scope, Lack of Detail
- Schedule Not Baselined
- Missing Logic
- Multiple Editors, Conflicting Edits
- Schedule Reviewed **Daily**
 - 45 minutes
 - ~40 participants, ~10 contributors
 - Contentious



Plan of Action

1. Retire Old Schedule 
2. Build New Schedule for Upcoming Work
3. Establish Change Control
4. Status New Schedule Weekly

Schedule Lacked Purpose

2. Build New Schedule

- Increased Level of Detail (2x)
- Small Tasks (8/80 Rule)
- Standards Compliant (GAO)
 - Complete Known Scope of Work
 - Full and **Simple** Schedule Logic
 - Resource Loaded (Generic Roles)
 - Traceable

2. Build New Schedule: Challenges

MIDAS Objections

- Building Schedule was
 - Waste of time
 - Distraction from planning work
- MIDAS: Increased Level of Detail was **Outrageous!**
 - Effectively doubled schedule size
 - Tracking will be a nightmare
 - FSA leadership: doubling down on micromanagement
 - **“We can’t spend an hour managing the schedule for every hour of work we do!”**
- PMO Intervention: Can we Find a Compromise?

Talk Takeaway

Can we Find a Compromise?

MIDAS's Schedule Problems

- Lack of Detail
- Lack of Tracking

Why is Detail Important?

- ...

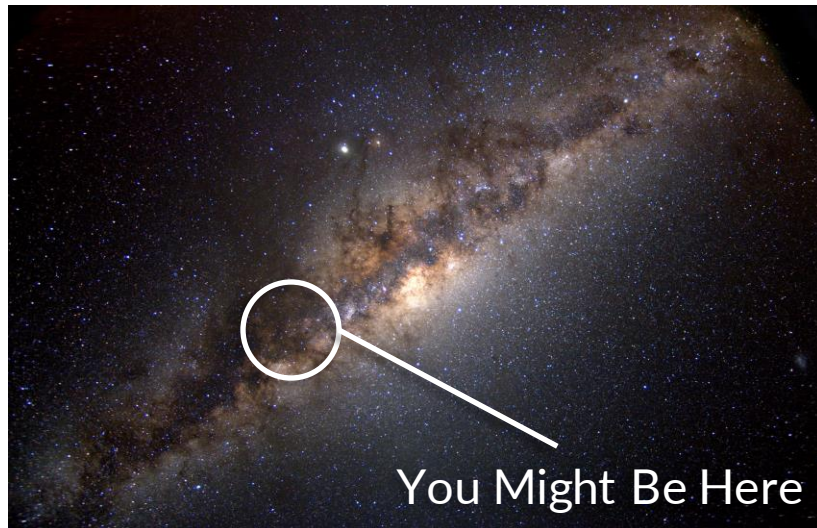


Image Credit: NASA.gov

Talk Takeaway

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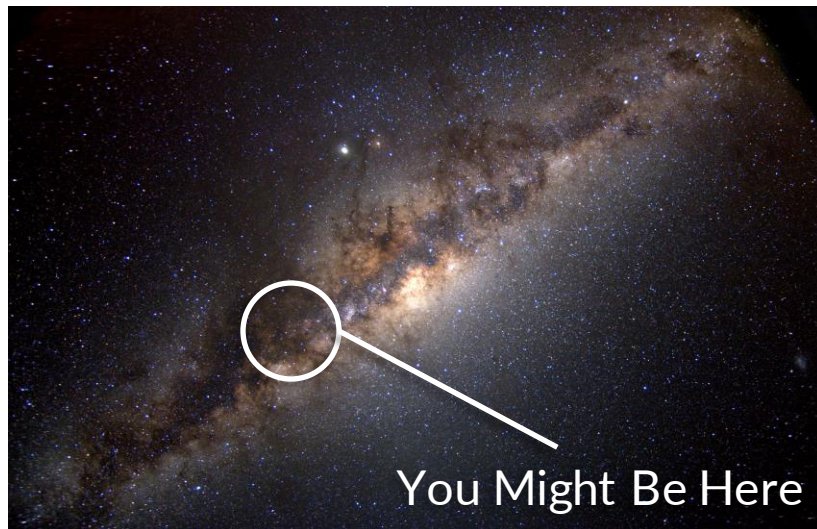


Image Credit: NASA.gov

Why is Detail Important?

- Smaller Tasks Easier to Estimate
- Easier to Pinpoint Where You Are with MORE Detail
- MIDAS Hadn't Tried it Before

Talk Takeaway

Can we Find a Compromise?

MIDAS's Schedule Problems

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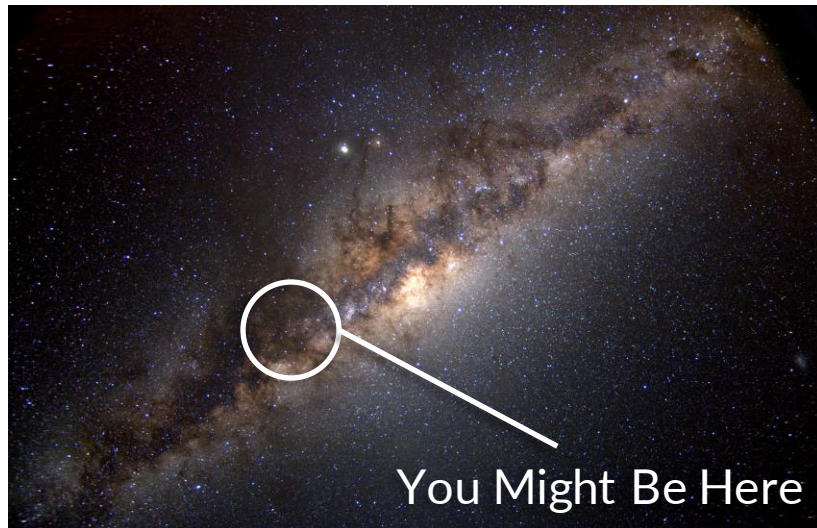


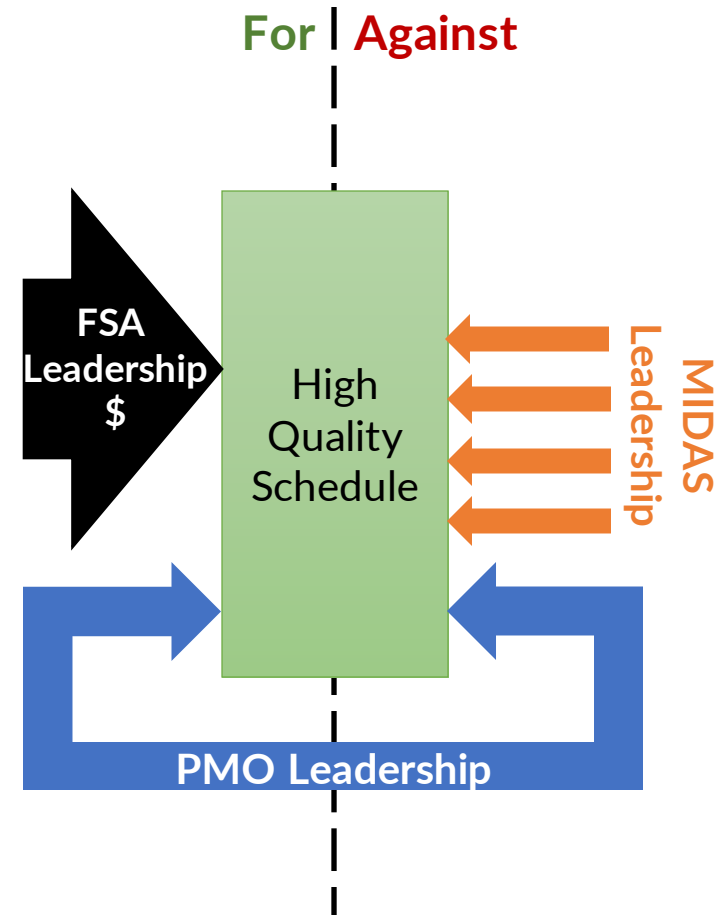
Image Credit: NASA.gov

Schedule Managers:

- When You are Right
 1. Make **sure** you are right
 2. Don't give an inch
- **Compromising on Schedule Leads to a Compromised Schedule**

2. Build New Schedule: Success Factors

- FSA Leadership Insisted
- Persuasion
 - Teachable moments
 - PMO did the heavy schedule lifts



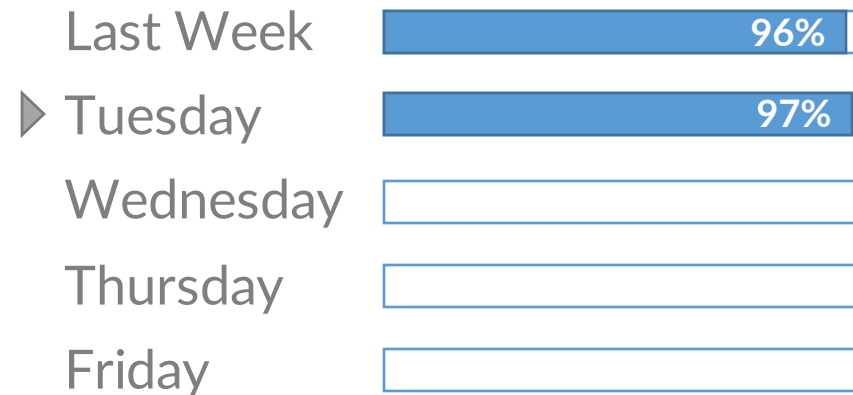
PMO Staff Transition

◆▶ Release 2.3 Kickoff
Releases 2.1 & 2.2 Deploy

2. Persuasion: Teachable Moment

- Task: Setup Software Release Environment
- Duration on Old Schedule: 1 Day
- DevOps Engineer Reporting Daily Progress

Daily All Hands Review



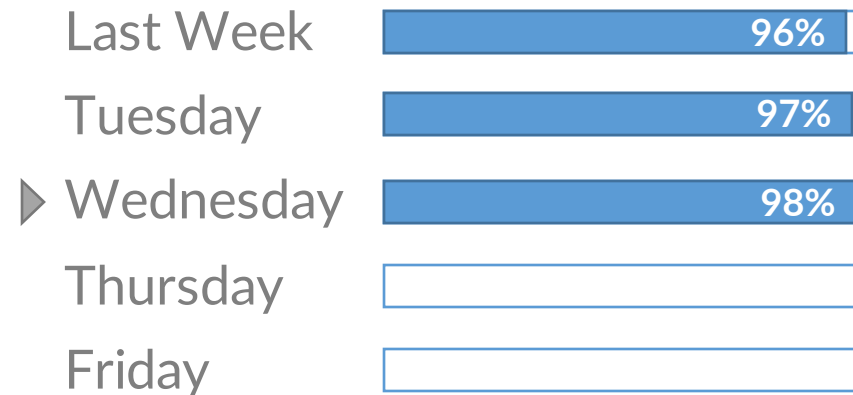
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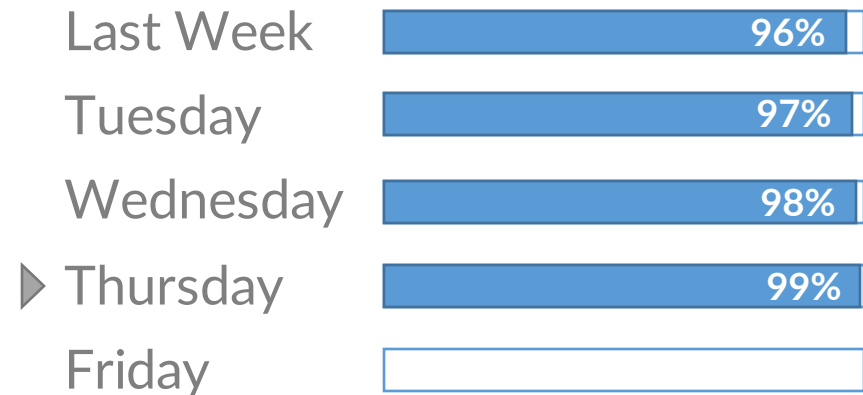
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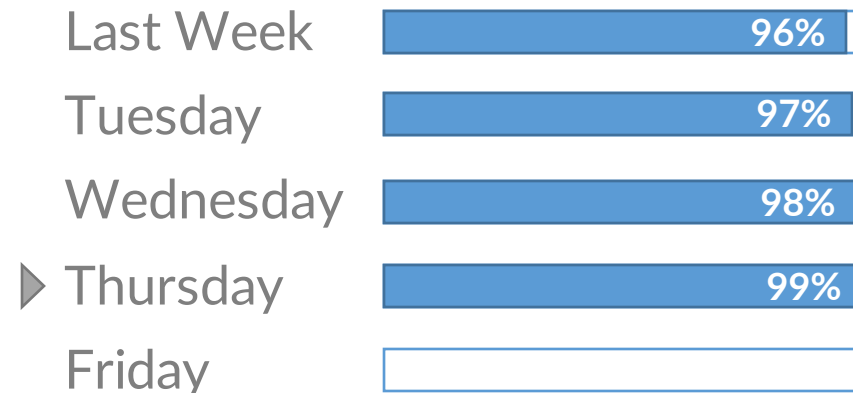
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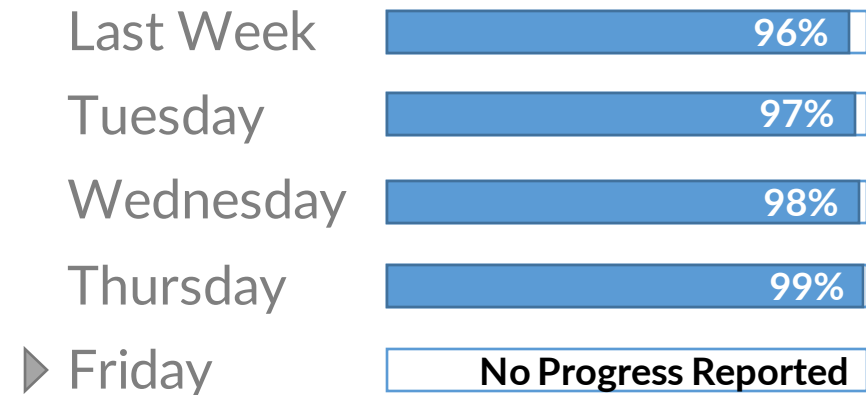
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What's 3% of an 8-hour task?

2. Persuasion: Teachable Moment

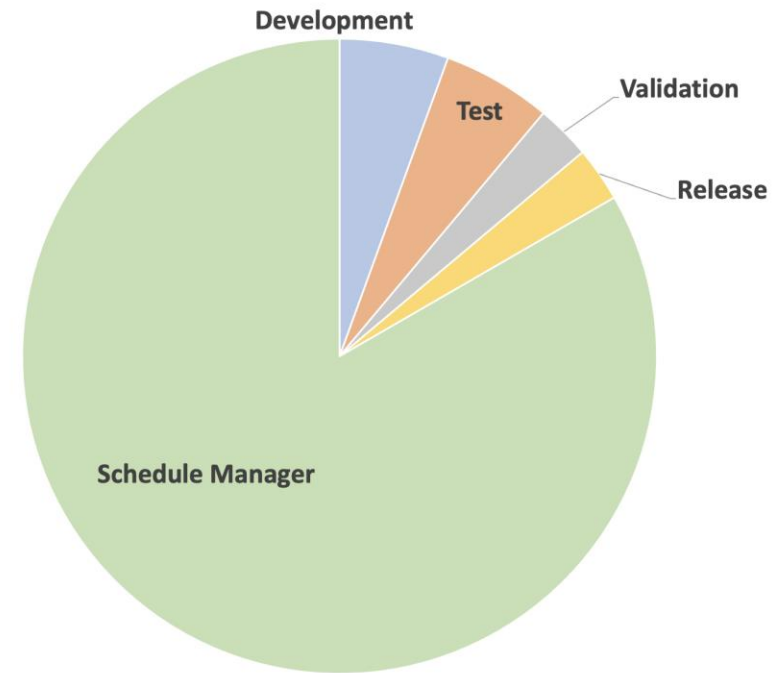
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What's 3% of an 8-hour task?

2. Persuasion: Do The Heavy Schedule Lifts

- Why Did the Schedule Manager Build the Schedule?
 - Knew how to do it
 - Wanted to do it
 - Had time to do it
- How?
 - 1-on-1 interviews
 - Draft schedule segments
 - 1-on-1 reviews
 - **Group reviews**



Notional Time Contributions

2. Persuasion: Group Reviews

New Schedule and Process are

- ✗ Too Detailed
- ✗ Too Invasive
- ✗ Impossible to Maintain
- ✗ Redundant with Software Development Tracking Tool


Reassurance

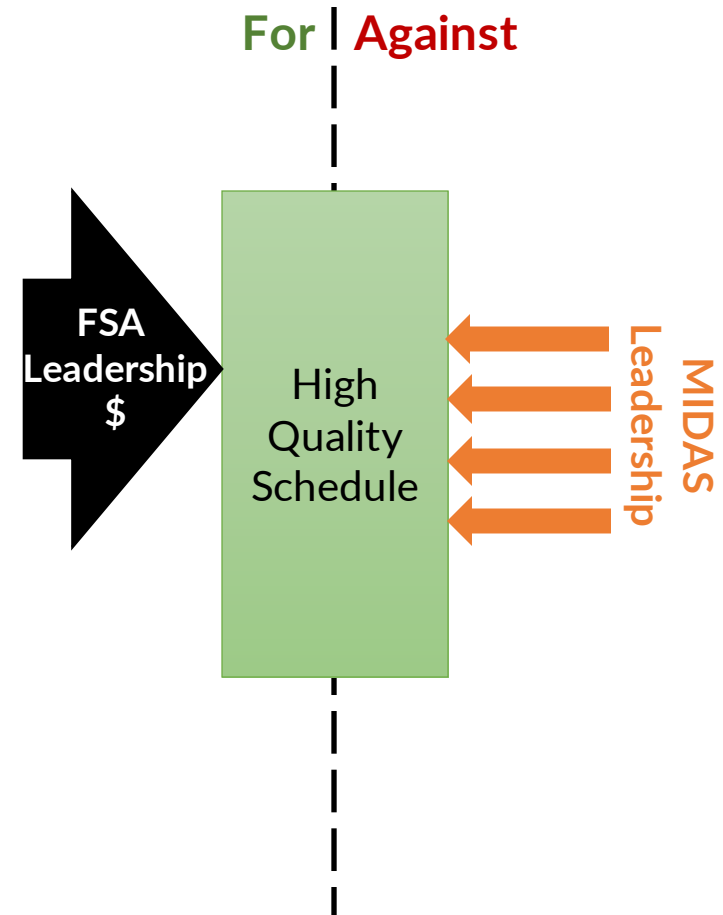
- We Can Always Reduce Detail
- We Won't Tell You What to Do
- We Will Spend Less Time Statusing
- Give This a Chance (3 Weeks)
 - Take feedback
 - Correct and adapt
 - Or toss everything out

3. Establish Change Control

- Scope and Schedule Drafted
- Change Control Board Meets on Tuesdays
- CCB Reviews Requested Scope or Schedule Changes
- New **Approved** Work Allowed to Begin
- Master Schedule Updated

3. Establish Change Control: Challenges

- Little Firsthand Experience
- MIDAS Leadership **Strongly** Opposed
 - Just wanted to get started
 - *“Why don’t you hand us a pile of money and we tell you what we did with it.”*
- FSA Leadership **IN\$\$\$TED**
- What’s the Point (Serious Question) 



3. Establish Change Control: Challenges

- Attempt #1: **Failed**
- Attempt #2: **Failed**

Fallout

- MIDAS Leadership's Worst Fears **Re-Confirmed**
- Developers Idle
- Release 2.3 Will be **Late***

Talk Takeaway (What's the Point)

Why Create a Baseline Schedule?

- ...

Talk Takeaway  (What's the Point)

Why Create a Baseline Schedule?

Build Consensus

Talk Takeaway (What's the Point)

Schedule Baselines Exist To

- ~~Cast Judgement~~
- Inform Decision Making
- It's ~~Okay~~ **Expected** to Slip the Baseline
- Exposing Schedule Variances Demonstrates Control

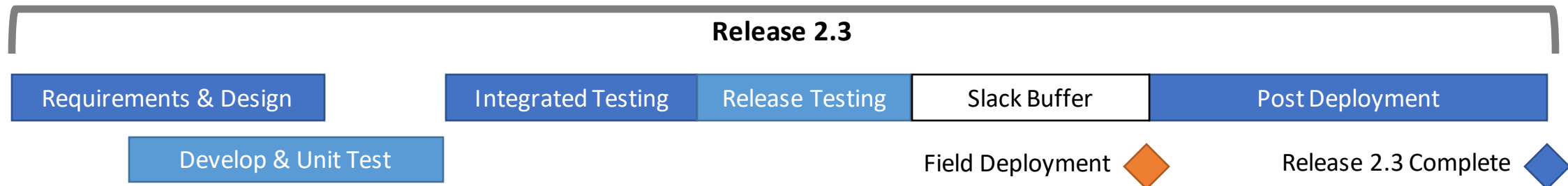
Build Consensus



3. Teachable Moment: What is a Schedule Baseline

The agreed upon estimated start, finish, duration, effort and resource loads for all planned project work and events.

- Schedule Not Yet Decided
- Release Can Not Be Late Before It Starts
- FSA Leadership Now Responsible for All Business Risk



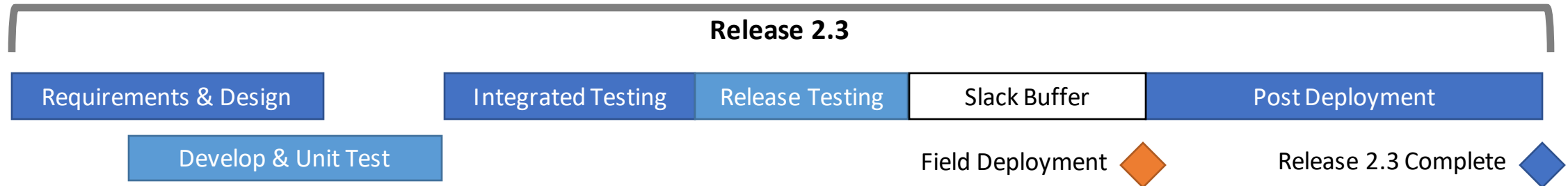


PMO Staff Transition



3. Establish Change Control: CCB #3

- Schedule Approved
- Software Development Started Immediately



4. Status New Schedule Weekly

- Status Sheets Sent to Team Leads Wednesday. Due Back COB Friday
 - Low pressure
 - Done at Team Lead's convenience
- Only Responsible for Reporting Progress
 - Actual hours or 25% increments
 - Additional intel optional
 - Schedule Manager processed the date shifts
- Met with Team Leads to Review the Previous Week
 - Buffer between statusing and reporting to get stories straight

4. Status New Schedule Weekly: Challenges

Same MIDAS Concerns

- ✗ Too Detailed
- ✗ Too Invasive
- ✗ Impossible to Maintain
- ✗ Redundant with Software Development Tracking Tool

New FSA Concerns

- ✗ Statusing Not Frequent Enough
- ✗ Reports Always A Week Behind
(Currently Had No Reporting)
- ✗ Still Need Daily Status Meetings

4. Status New Schedule Weekly: Persuasion

- Easiest of the Four Steps
 - Well understood
 - Involved fewest participants
 - 10-minute effort once a week
- 1-on-1 Reviews
 - **Confidential**
 - 15-minute effort once a week (low priority meeting)

Results

- Quantitative
- Qualitative
- Process
- Farm Service Agency's Business



▶ *Release 2.3 Kickoff*

▶ *Release 2.4 Kickoff*

▶ *Release 2.5 Kickoff*

◆▶ *Release 2.6 Kickoff*
Releases 2.3 Deploys

Results

- Quantitative
- Qualitative
- Process
- Farm Service Agency's Business

Realized
Over Time

▶ Release 2.3 Kickoff

▶ Release 2.4 Kickoff

▶ Release 2.5 Kickoff

◆▶ Release 2.6 Kickoff
Releases 2.3 Deploys

Results: Quantitative

- Daily Status Meetings **Cancelled**

- Detailed Reports Every Friday

- Executive summary
- Life cycle tables
- Key events & watch list Gantt
- Earned value estimates (in hours)

- Predictable Releases

Activity	Weekly Time Commitment	
	Old Strategy	New Strategy
Statusing	150 hrs	5 hrs
Reviewing		2 hrs
Analysis	5 hrs	2 hrs
Reporting	NA	1 hrs
Total	155 hrs	10 hrs

▶ Release 2.3 Kickoff

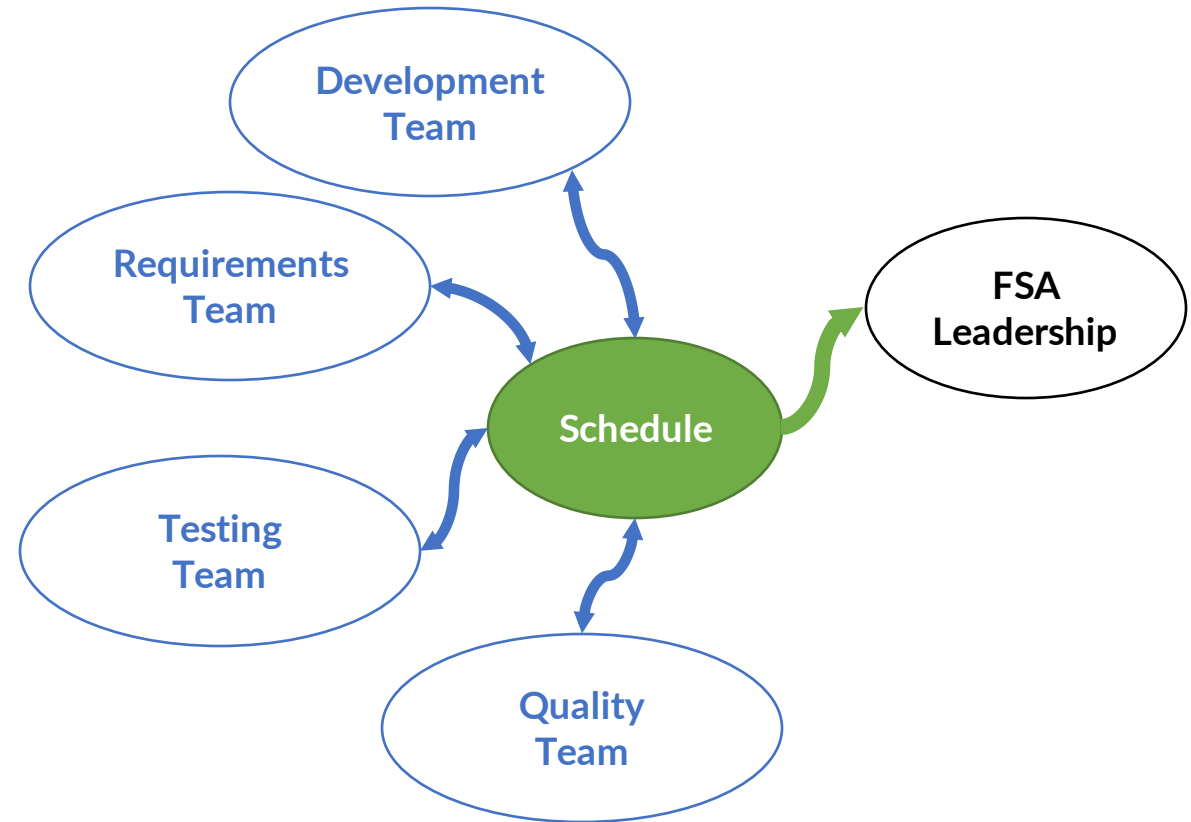
▶ Release 2.4 Kickoff

▶ Release 2.5 Kickoff

◆▶ Release 2.6 Kickoff
Releases 2.3 Deploys

Results: Qualitative

- Arguments about Schedule **Ceased**
 - No meetings assigning blame
 - Schedule became an accepted fact
- **Confidential** 1-on-1 Reviews Improved Communication
 - Trust increased
 - More information shared with those who needed to know
 - Communication lines reopened



Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23
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◆▶ Release 2.8 Kickoff
Releases 2.5 Deploys

◆▶ Release 2.9 Kickoff
Releases 2.6 Deploys

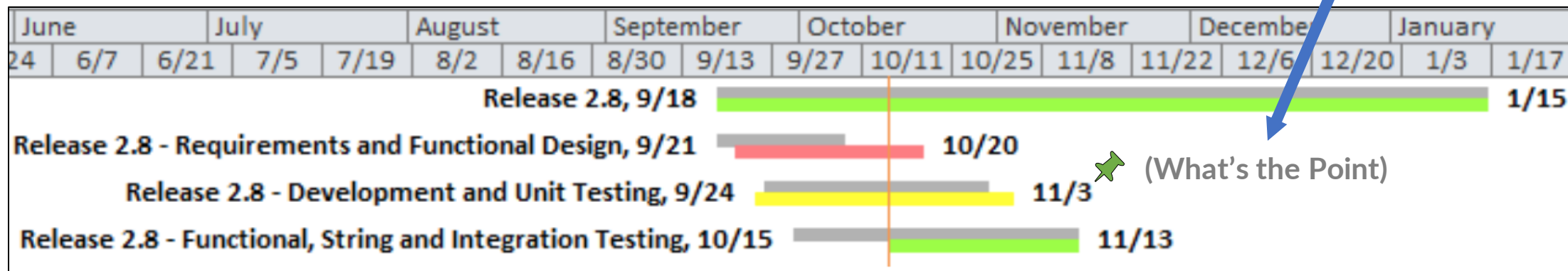
◆▶ Release 2.10 Kickoff
Releases 2.7 Deploys

◆▶ Release 2.11 Kickoff
Releases 2.8 Deploys

Results: Process

“The weekly status sheets forced us to look at every line and make hard decisions about work that was slipping.”

- Realistic Predictions
- Realistic Contingencies
- Smooth Change Control Process




Release 2.8 Summary Activities

Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23
◆▶ <i>Release 2.8 Kickoff</i> <i>Releases 2.5 Deploys</i>	◆▶ <i>Release 2.9 Kickoff</i> <i>Releases 2.6 Deploys</i>	◆▶ <i>Release 2.10 Kickoff</i> <i>Releases 2.7 Deploys</i>	◆▶ <i>Release 2.11 Kickoff</i> <i>Releases 2.8 Deploys</i>				

Results: FSA

- Work Remained Difficult
- Auditors Satisfied
- Improved Decision Making
- MIDAS Concluded with Set of Completed of Features
- FSA Maintained Control of its Projects

Talk Takeaways

- Compromising on Schedule Leads to a Compromised Schedule
- Schedule Baselines Create  Consensus
- Schedule is a Communications Tool
- Nothing We Did was New (Today)

The Big Three Questions





THANK YOU