

Frequent
Small
Good
Decoupled



FSGD
(Fizz Good)

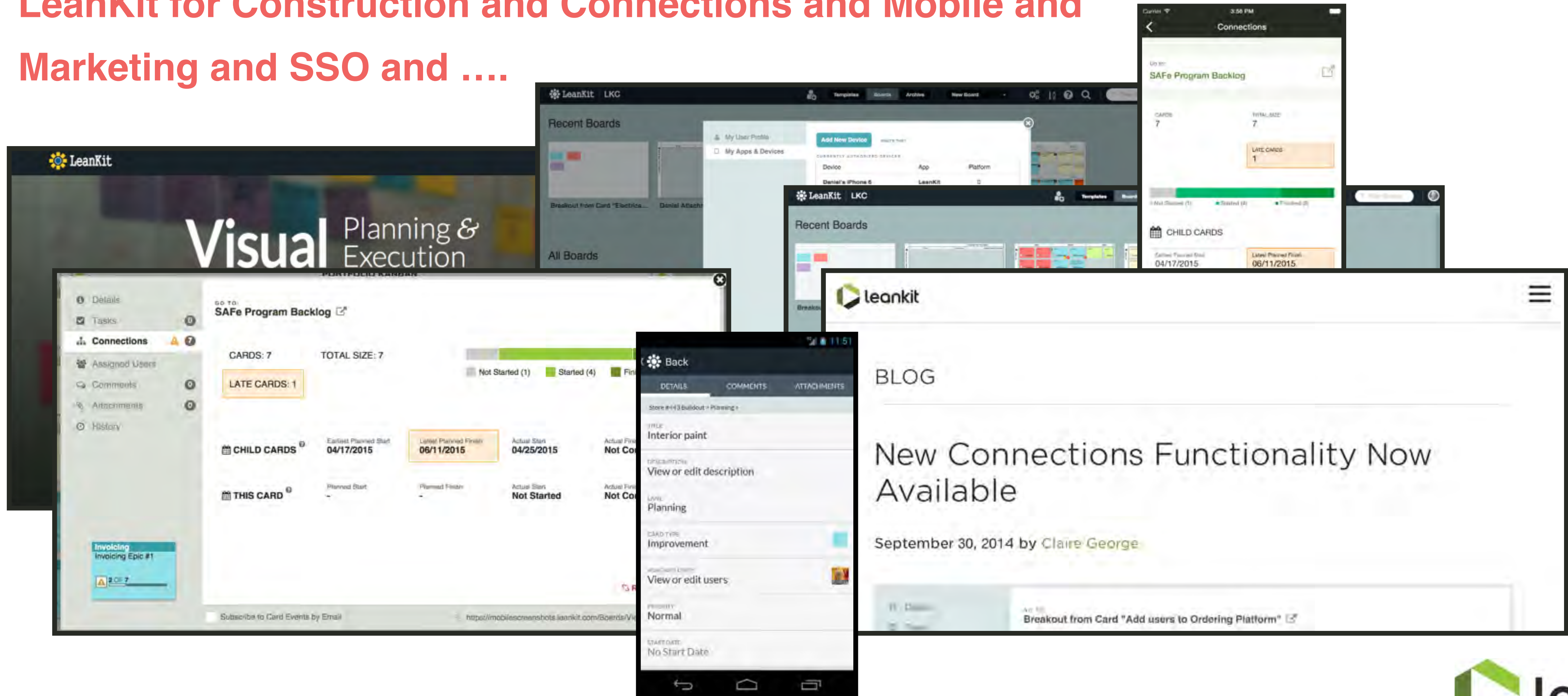


what **Fizz Good**
and
what **doesn't**



Hurray! Never Again

LeanKit for Construction and Connections and Mobile and Marketing and SSO and



**We love Lean,
Kanban,
Agile, DevOps**

AND



Frequent
Small
Good
Decoupled



FSGD
(Fizz Good)

Frequent

Small

Good

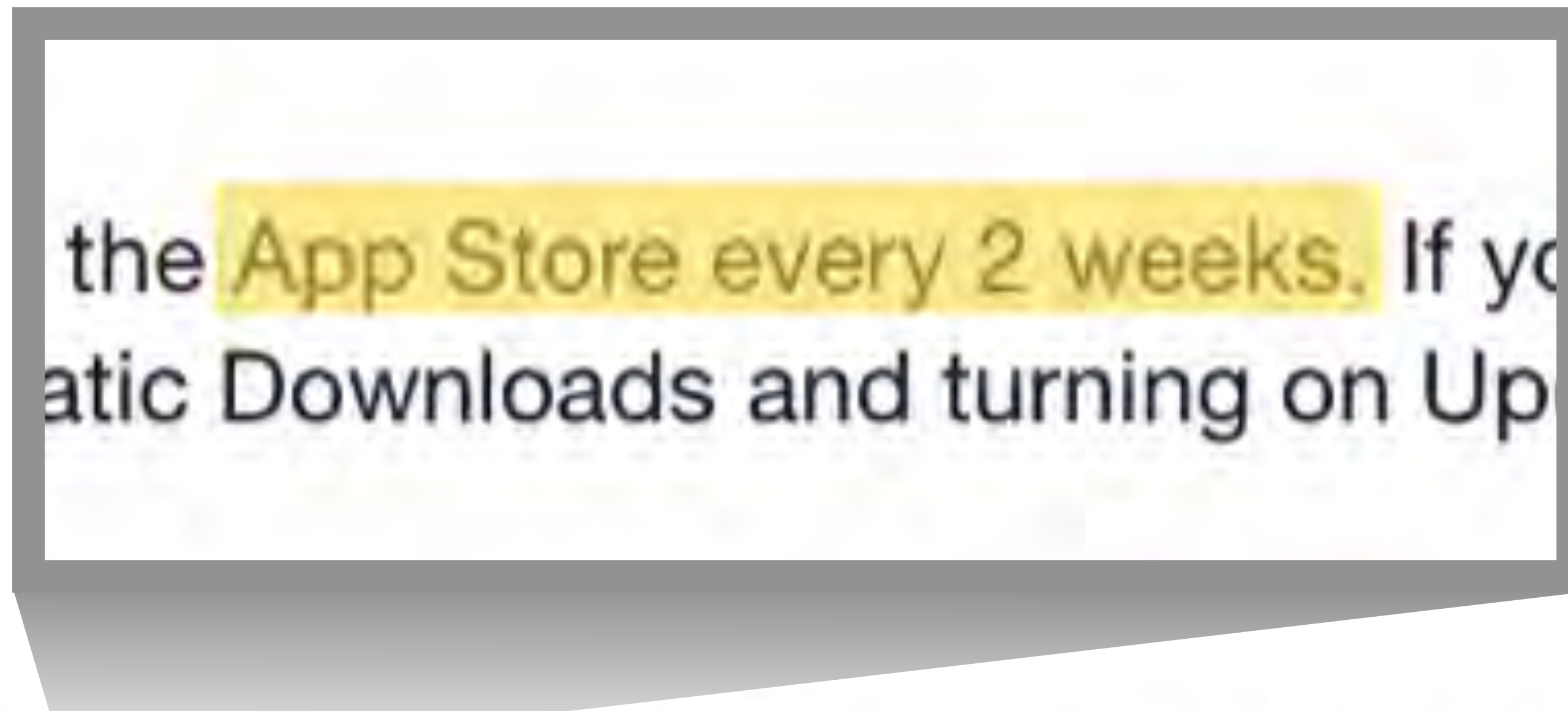
Decoupled

Annually
Quarterly
Sporadic

Release Frequently for ...

- Feedback
- Visibility into the work
- Opportunity to reprioritize
 - Maybe you're done
 - Critical issues
 - Unplanned work
 - Changing business realities





Version 16.0 Posted Oct 15, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the App Store every 2 weeks. If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.

Version 15.0 Posted Sep 29, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the App Store every 4 weeks. If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.

Version 14.9 Posted Sep 17, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the App Store every 4 weeks. If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.

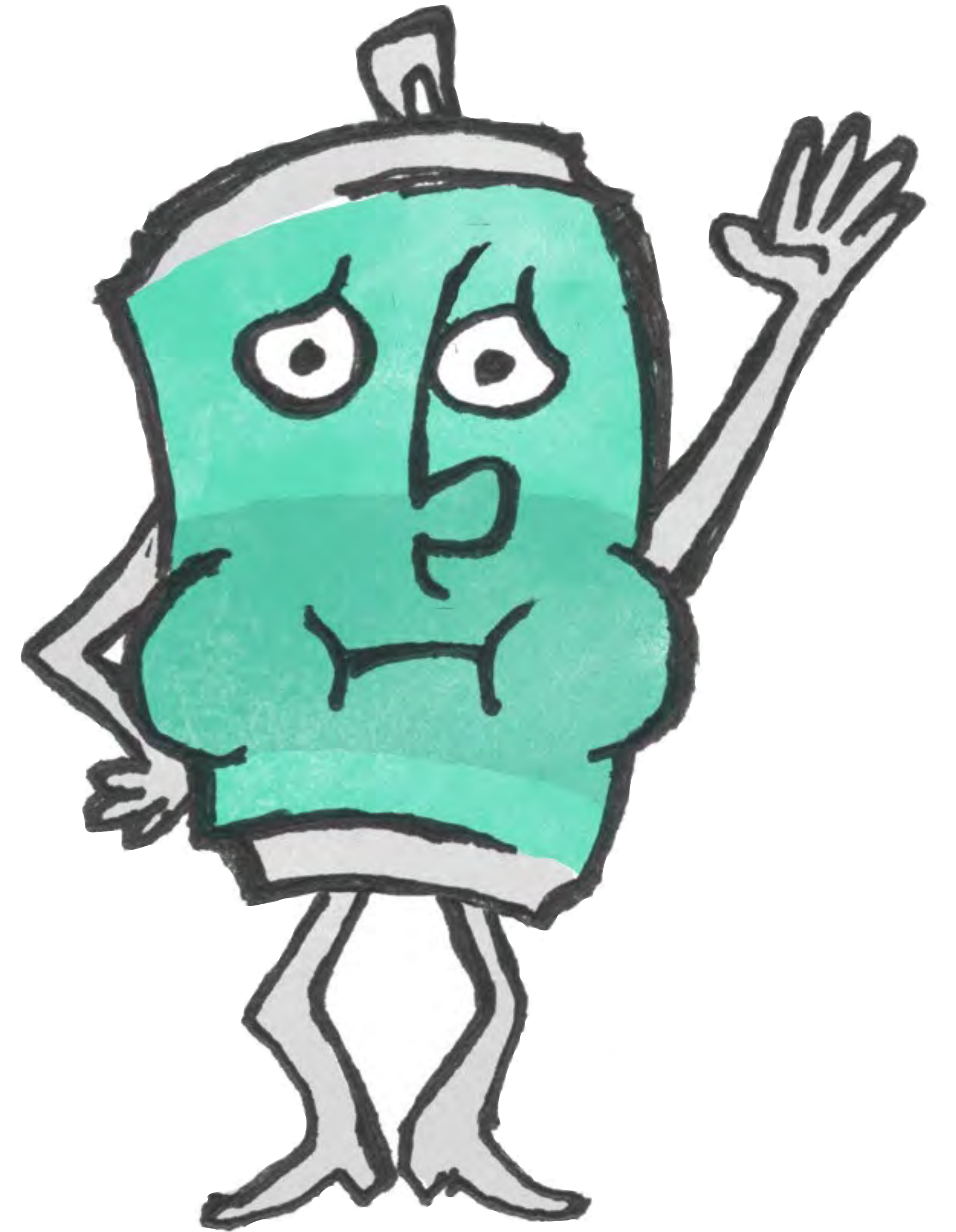
"We are getting away from 2 years, 3 years, 4 years, 5 years, to design, build, test and then deliver a product. We live in a world of high levels of agility; being able to build, measure, learn; being able to get on a faster cadence and a faster loop where we can deliver value more frequently."



S. Somasegar

Corporate Vice President, Developer Division

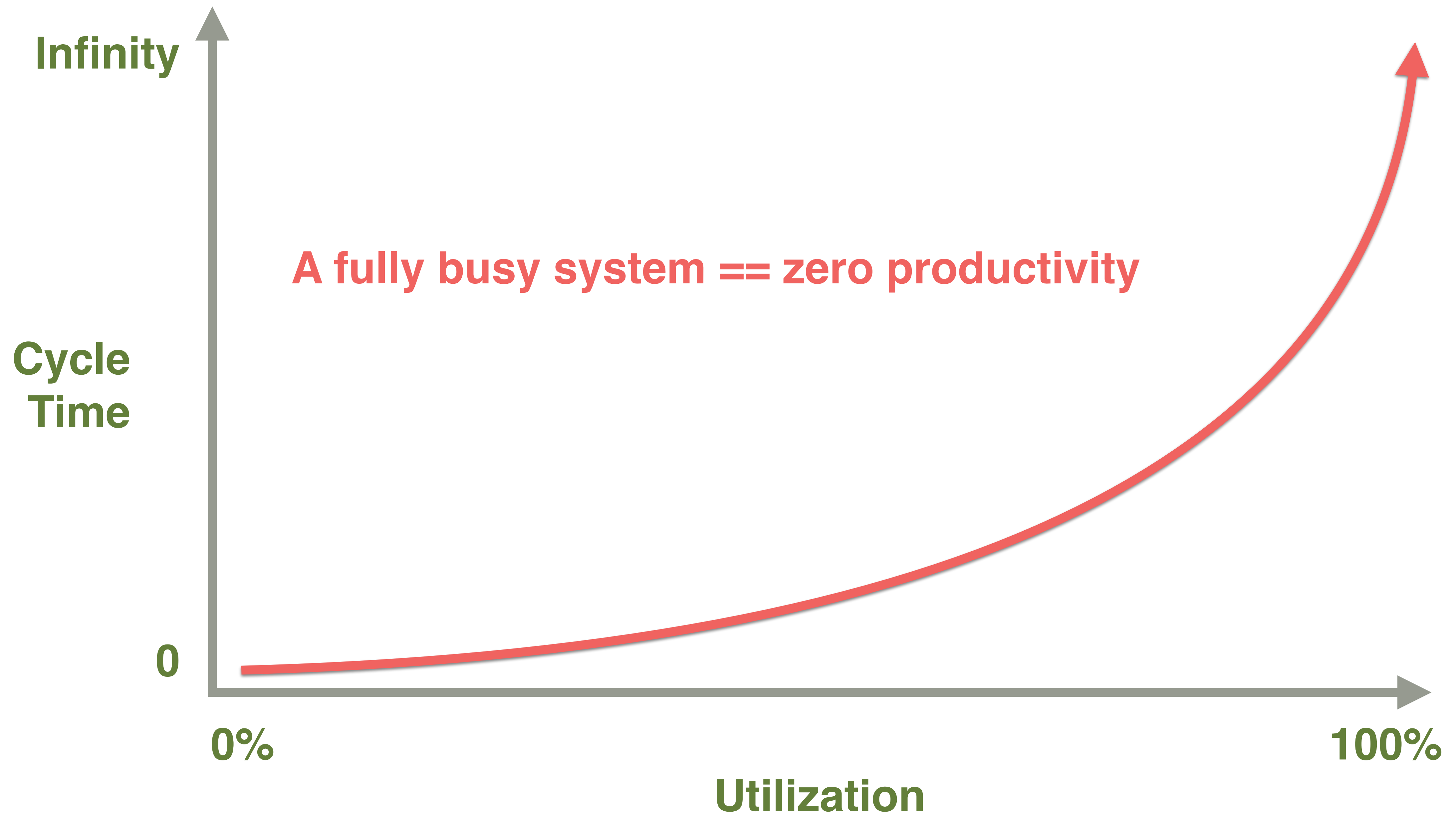
**... and we
don't just
mean to the
customer**





because math

(not the Agile Manifesto)



All credit and praise rightfully belongs to to Don Reinertsen

A little bit of reduction goes a long way

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen

Let's assume the starting point is 90% utilization, 10 day cycle time & no WIP limits

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen

A WIP limit of twice current average makes us 28% faster in return for 1% slack

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen

A WIP limit equal to current average makes us 54% faster in return for 5% slack

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen

**It's tough to
limit WIP with
variable batch
sizes**



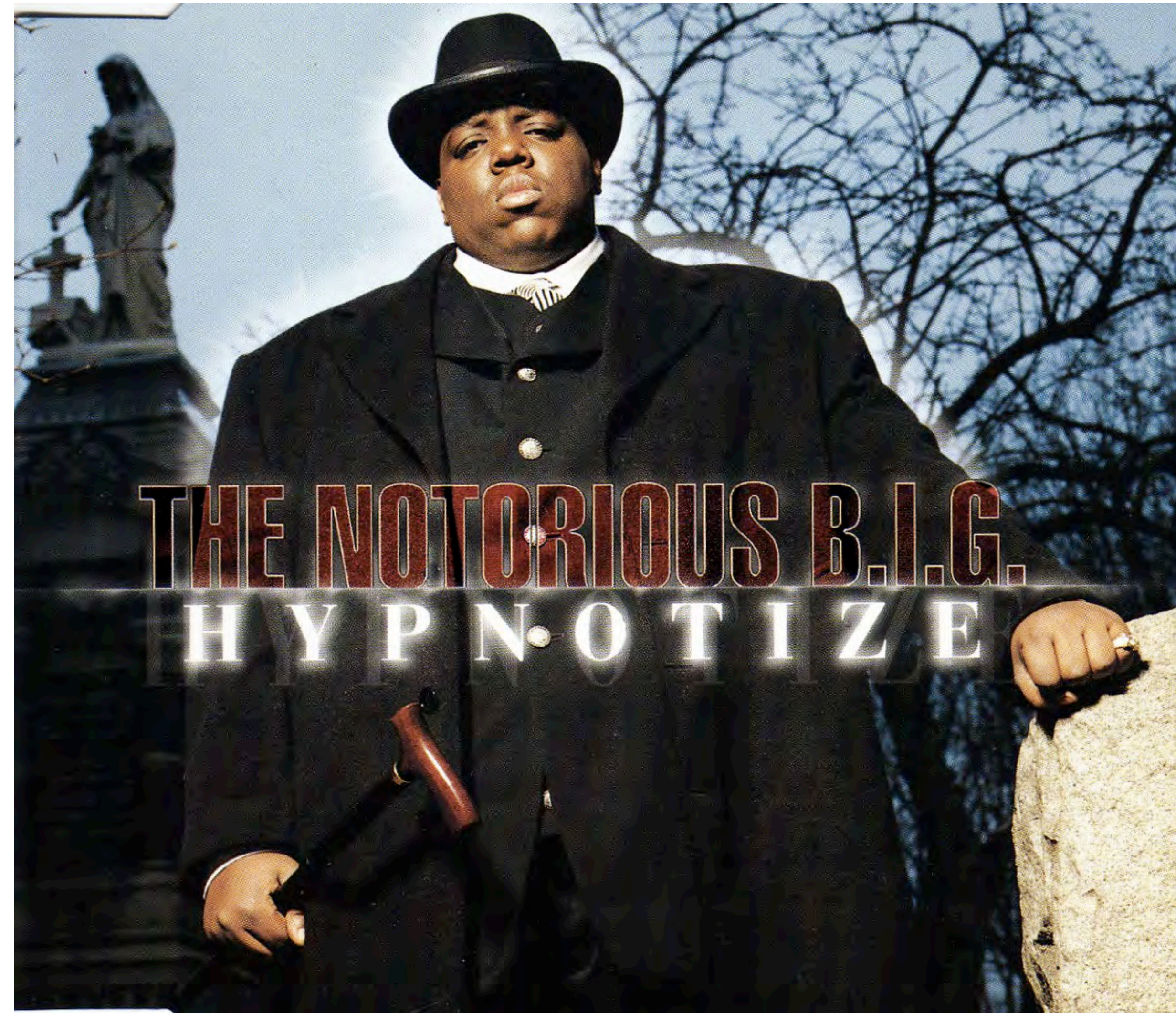
Frequent
Small
Good
Decoupled

Big

**Some things
are just
naturally big?**

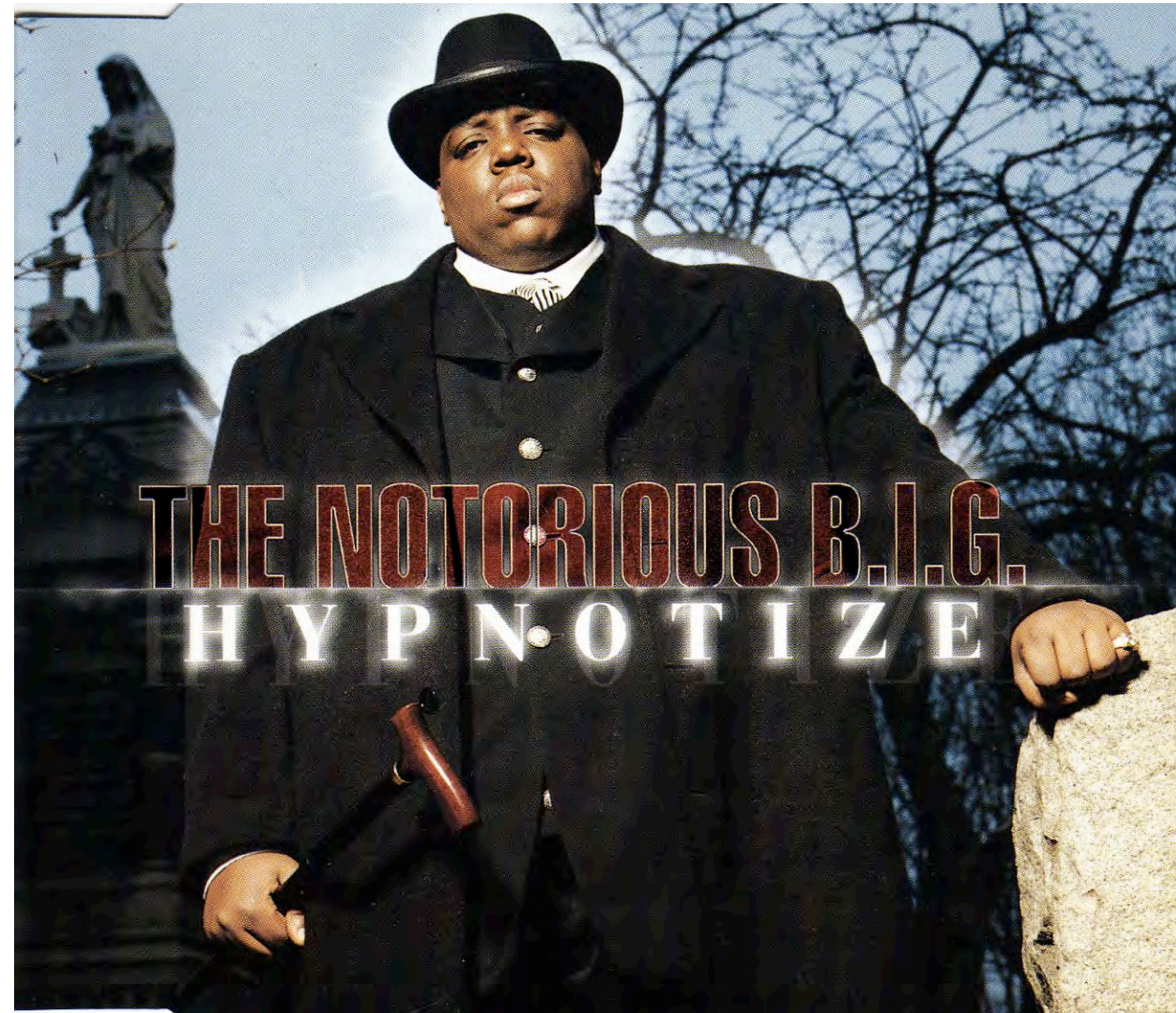


**Some things
are just
notoriously big**



Why?
Why?
Why?
Why?
Why?

Five Why's Root Cause Analysis



5 Why example: notoriously big things

Why does it have to be so big?

It does lots of things and has lots of components

Why does it do so many things?

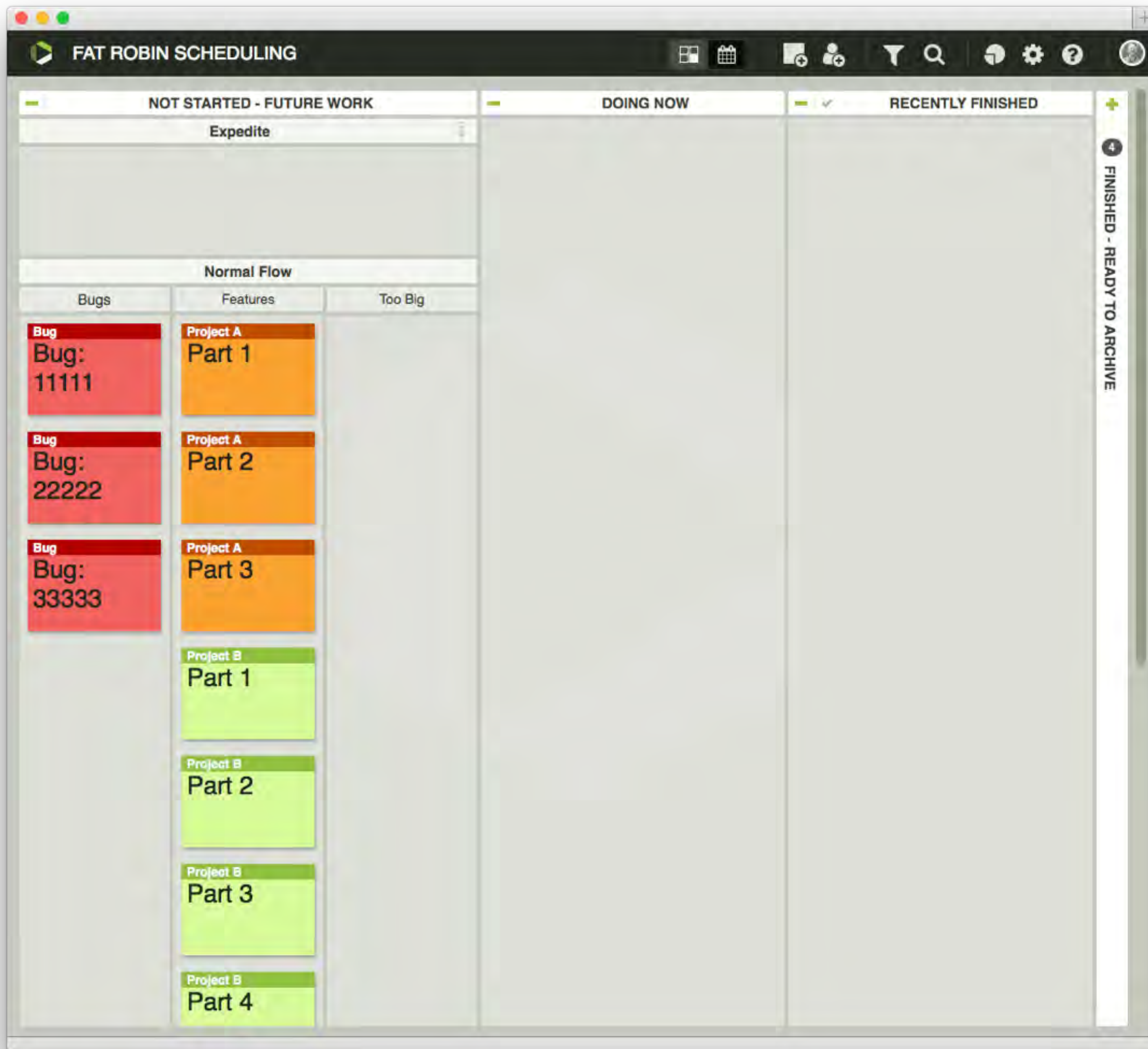
Because they are interrelated.

Why can't they be broken into several releases?

Because it is costly to deploy each of them

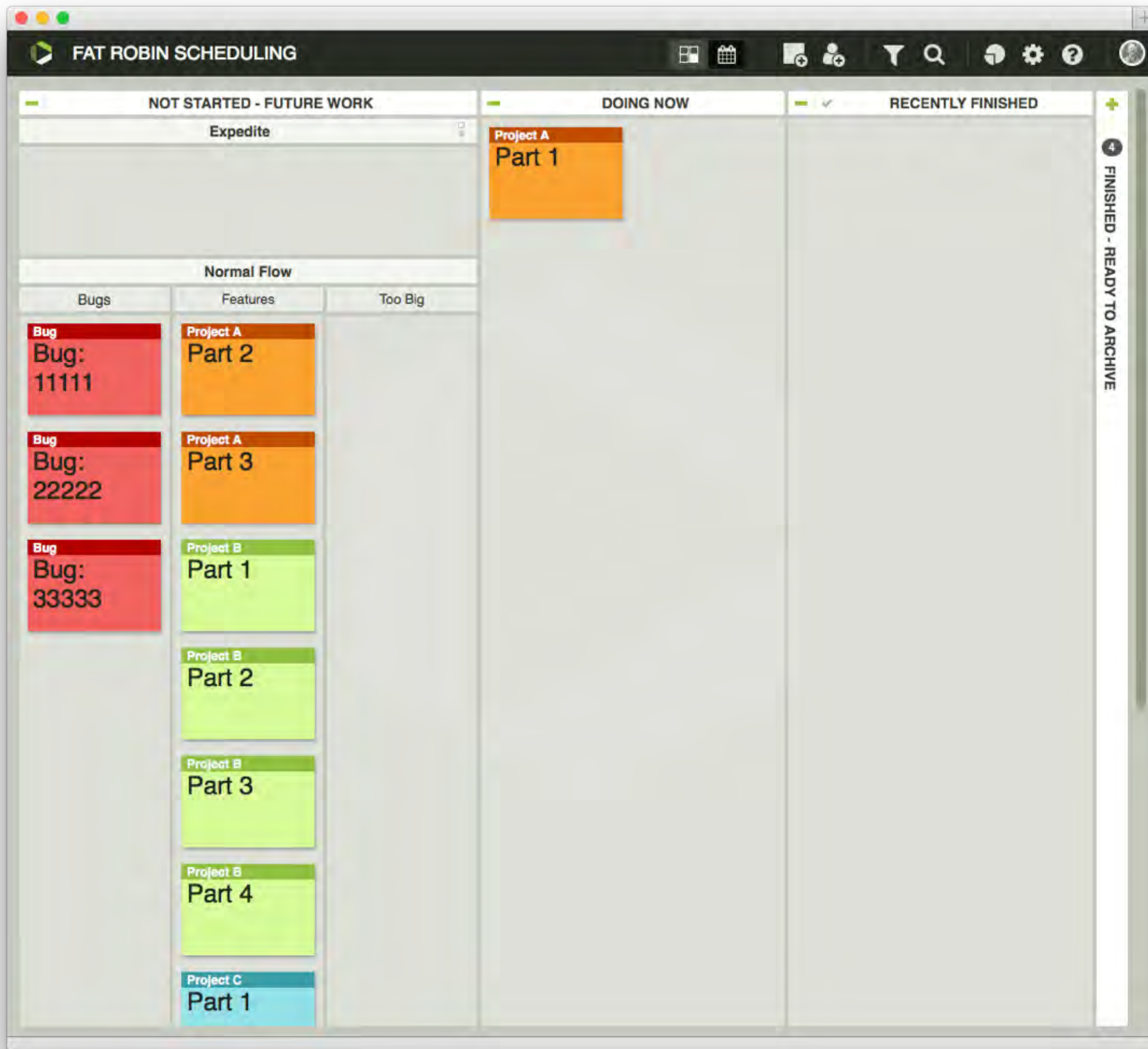
Why is that?

Because we do not have an automated testing and release process

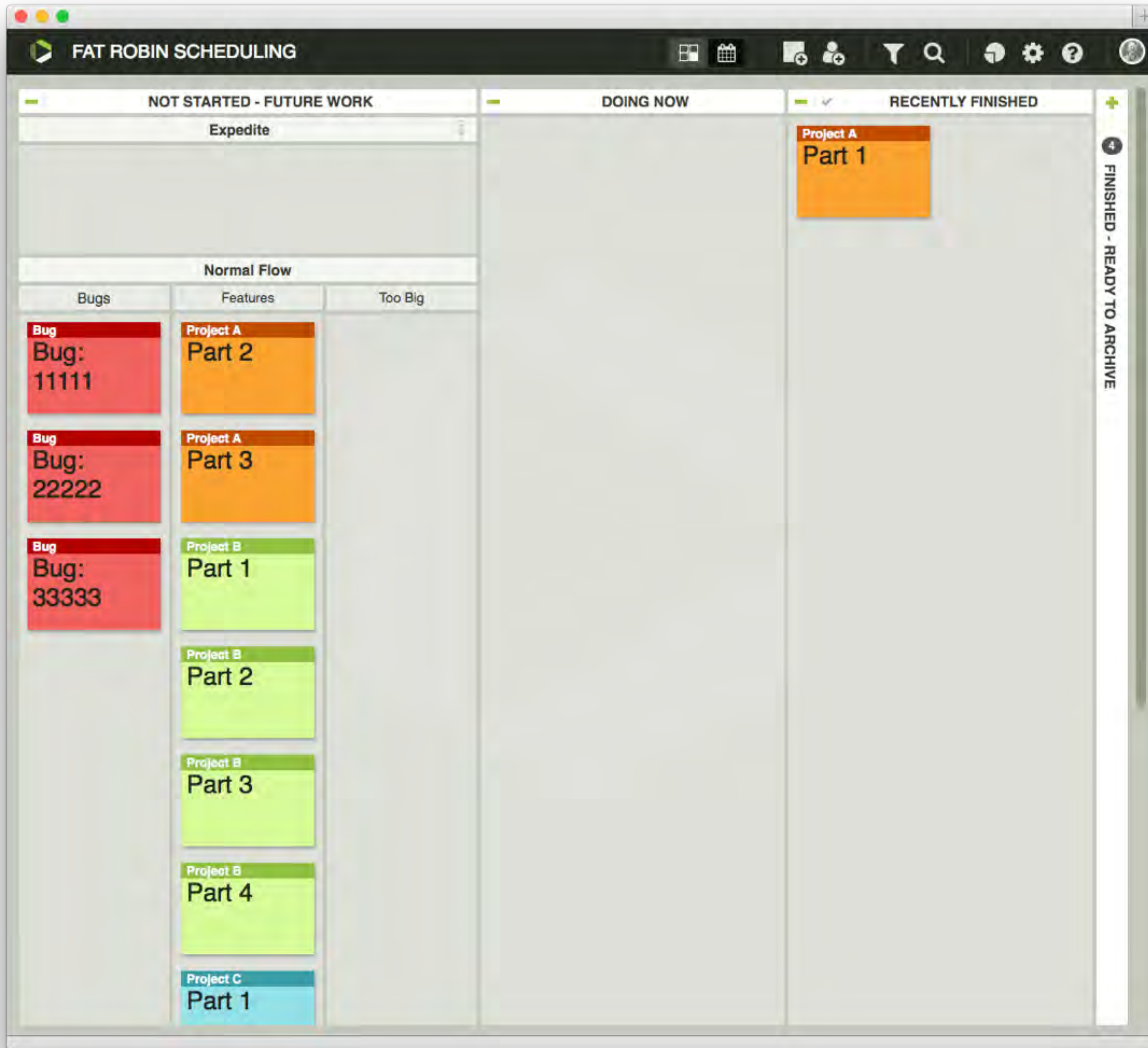


Round Robin Scheduling

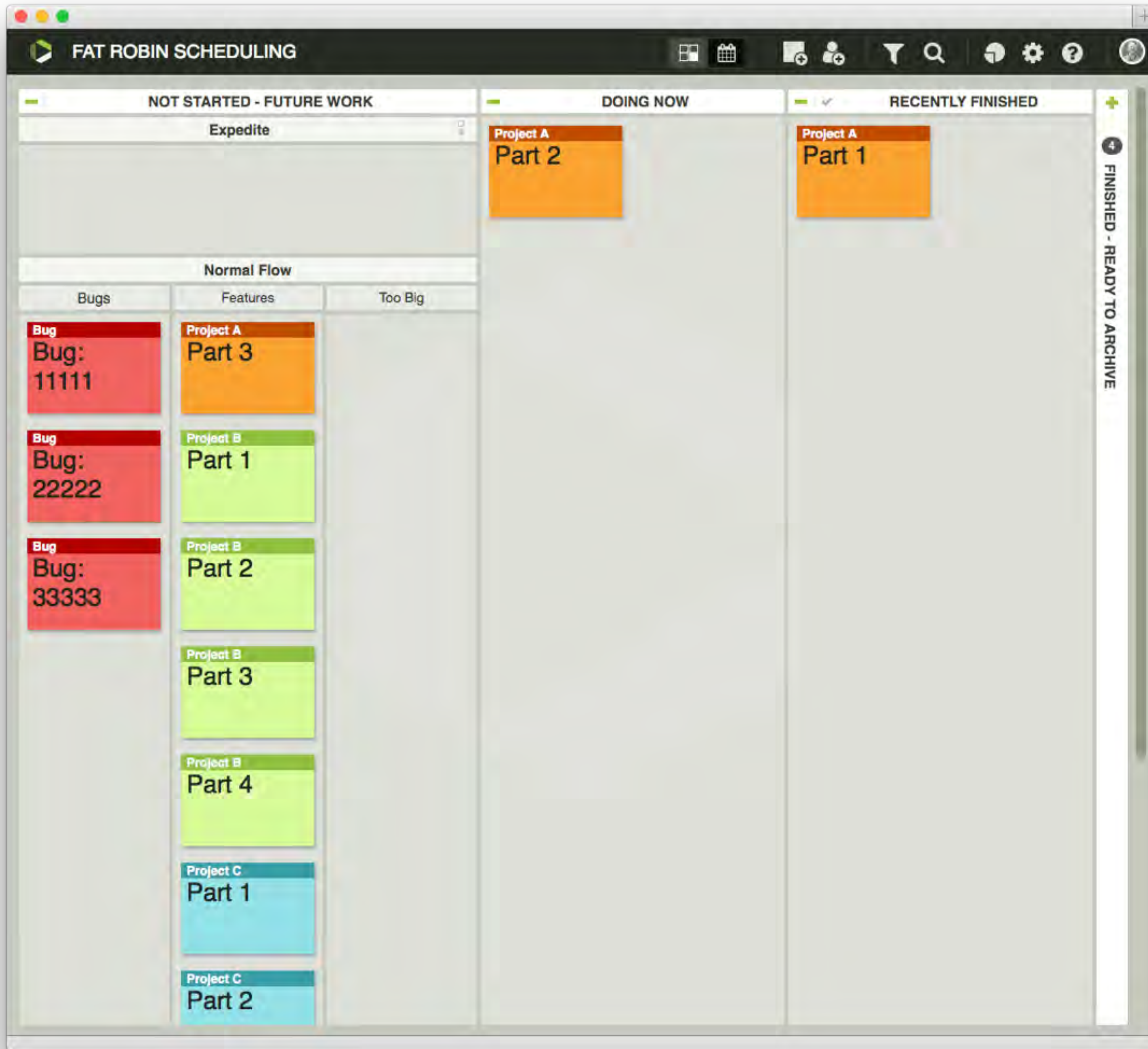
- Breaking work into smaller slices
- Just-in-time decision making



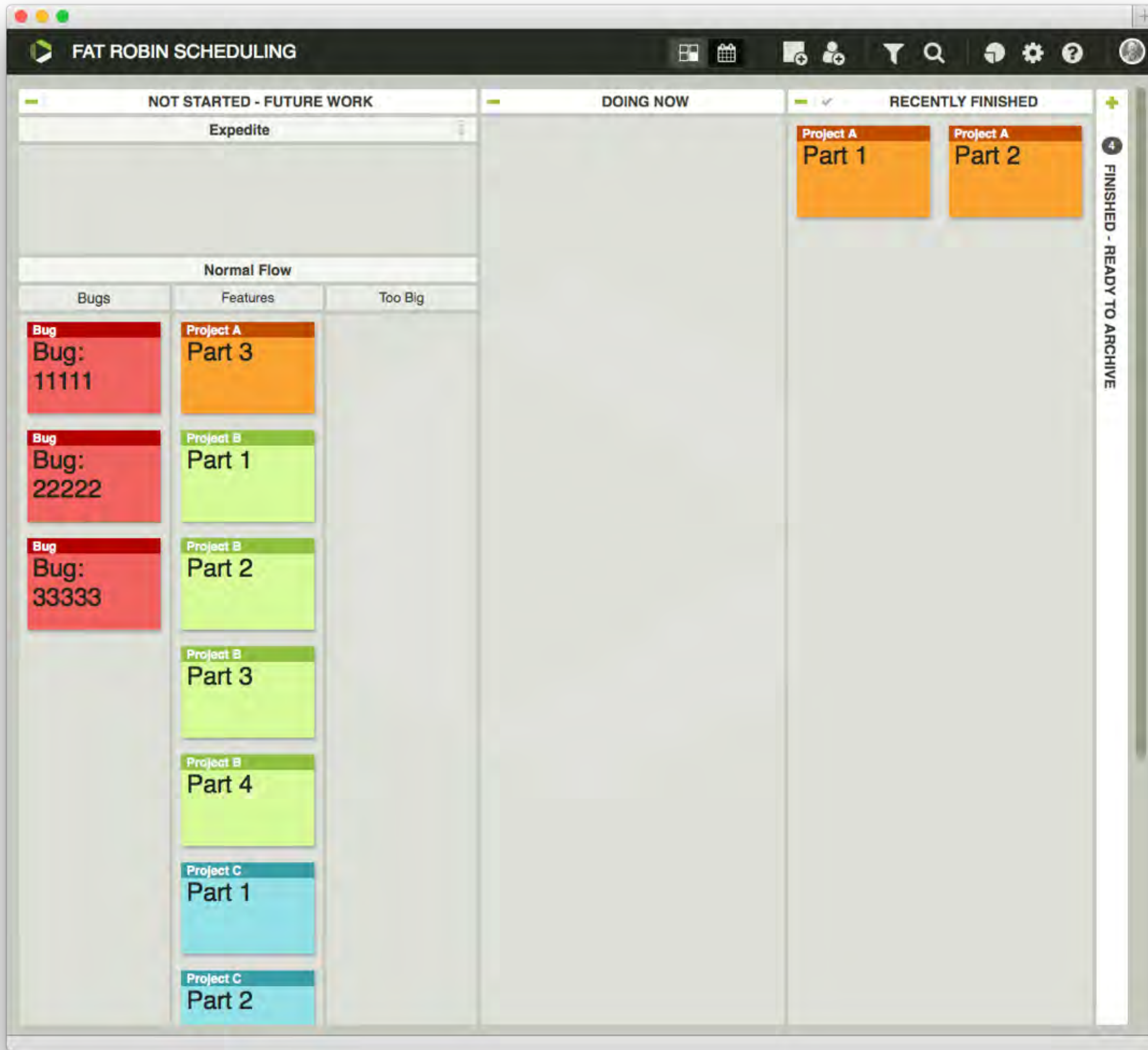
Round Robin Scheduling



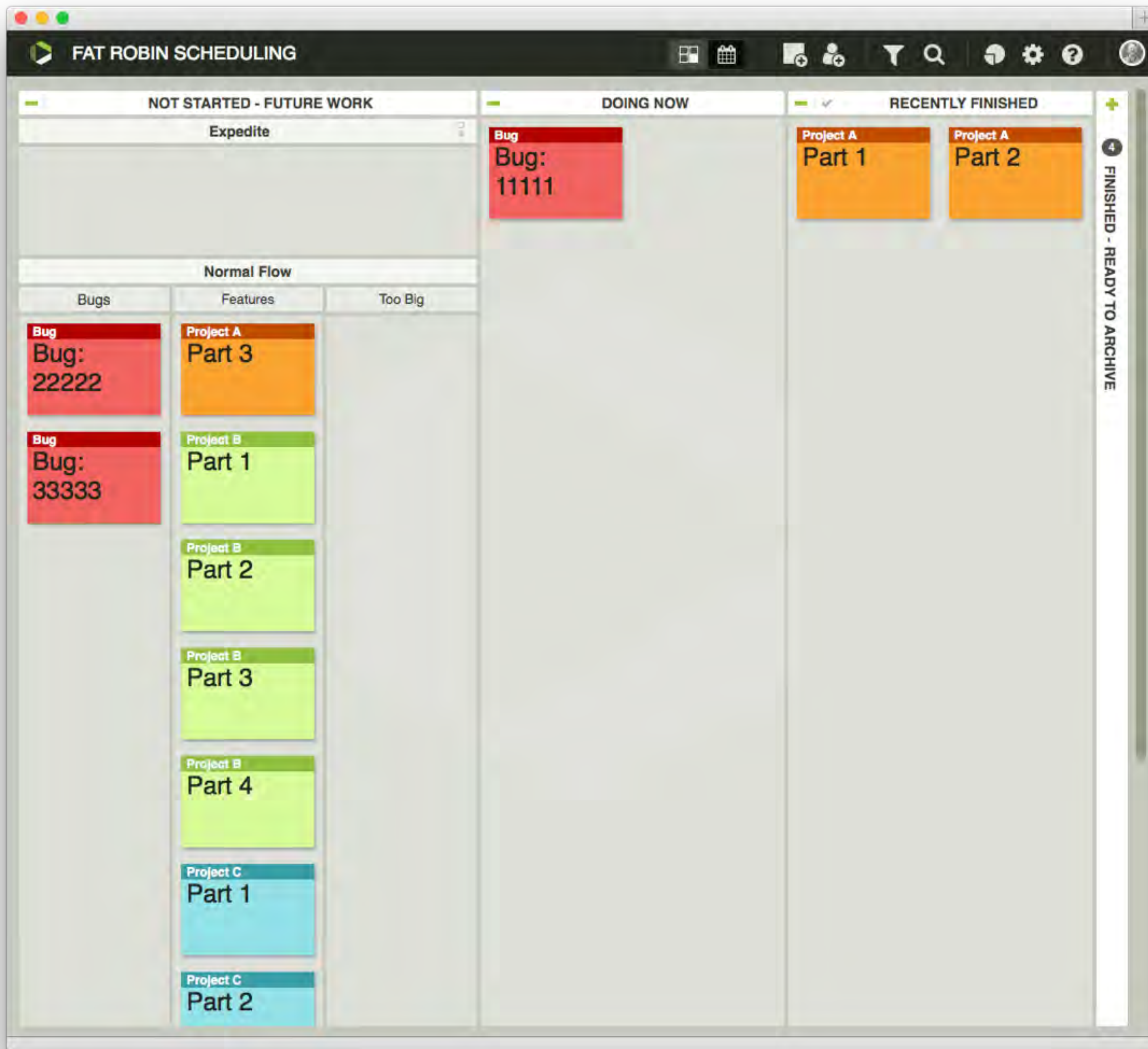
Round Robin Scheduling



Round Robin Scheduling

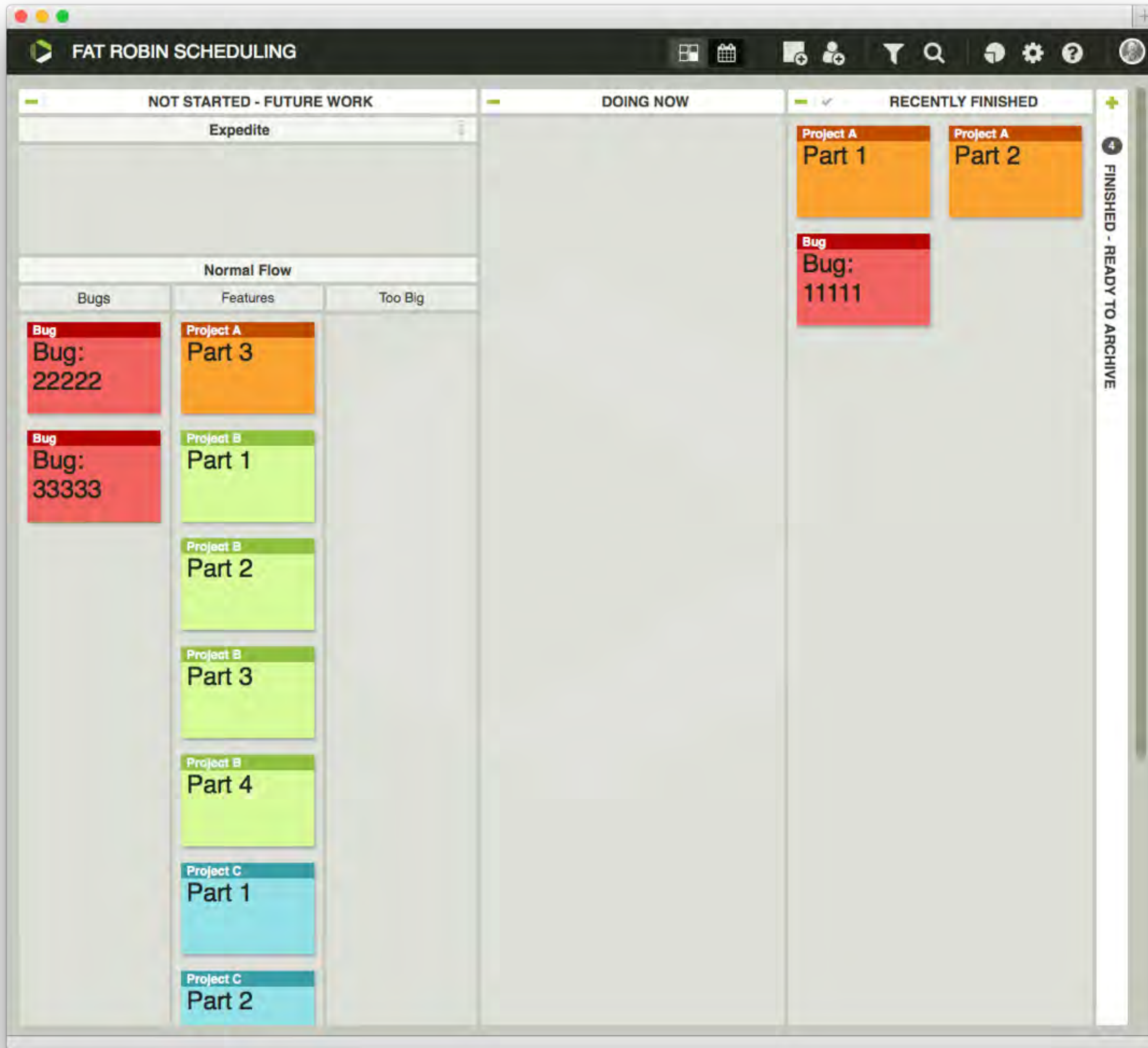


Round Robin Scheduling

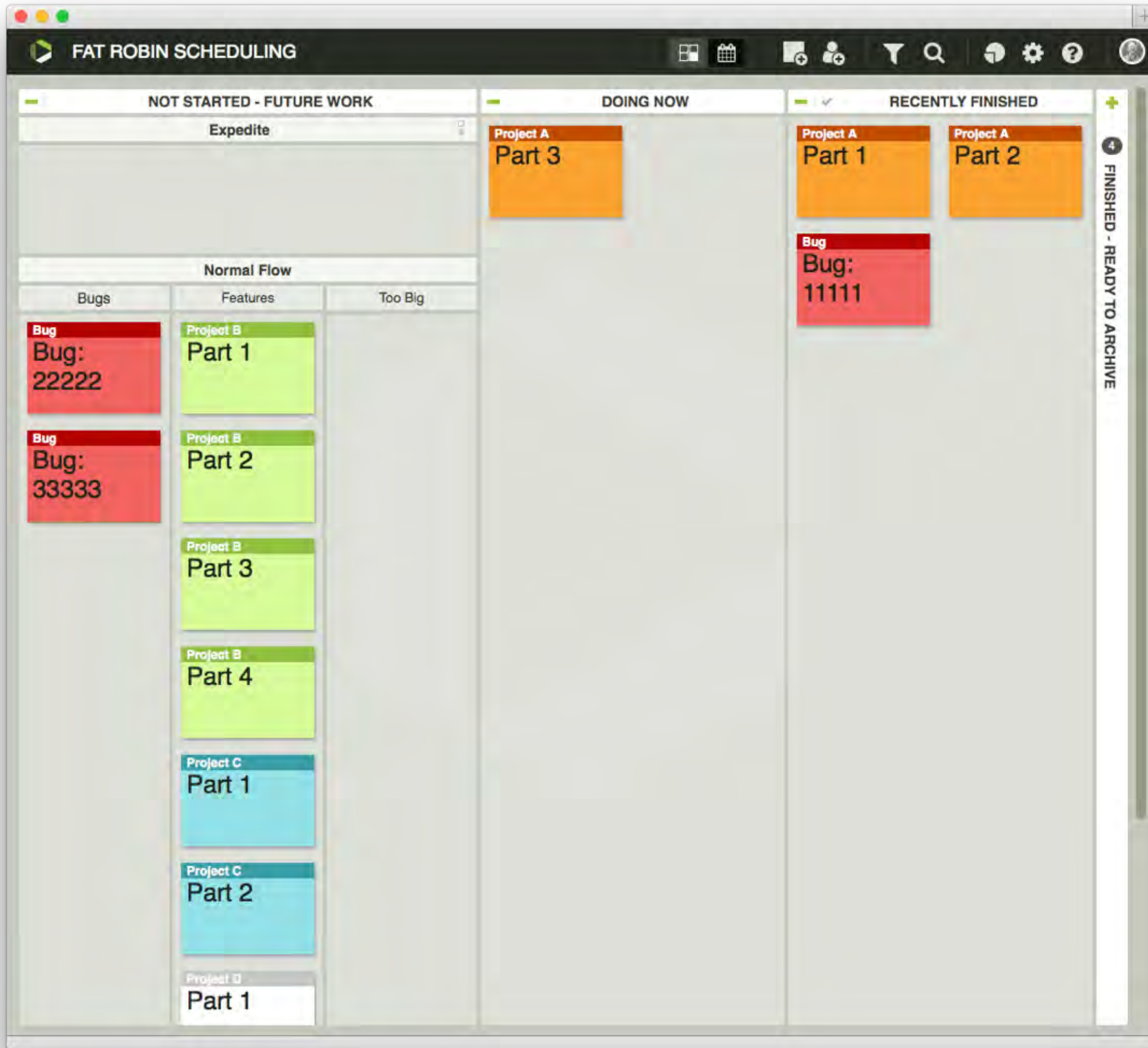


Round Robin Scheduling

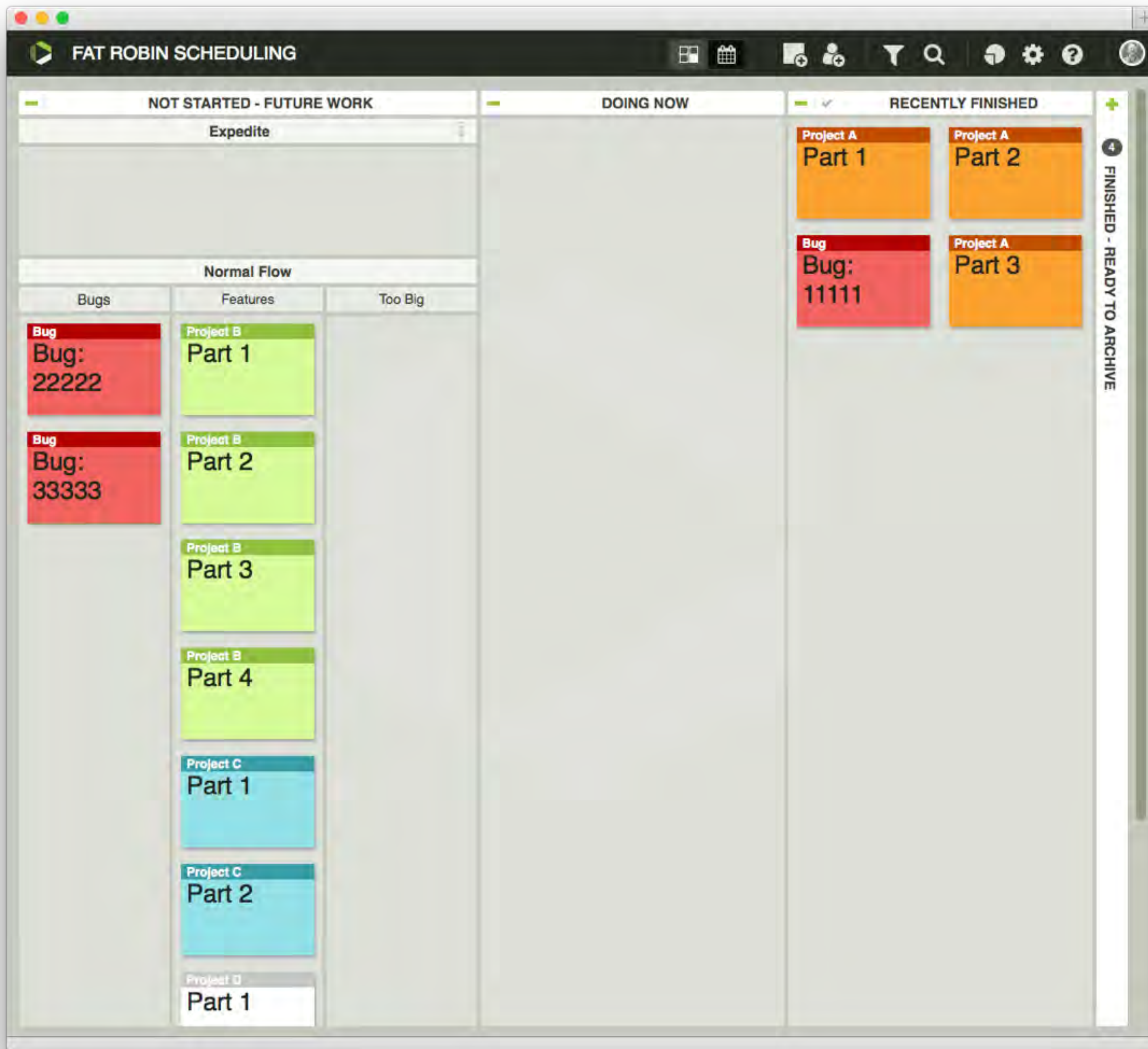
- Smaller batch size allows flexible reprioritization without context switching



Round Robin Scheduling

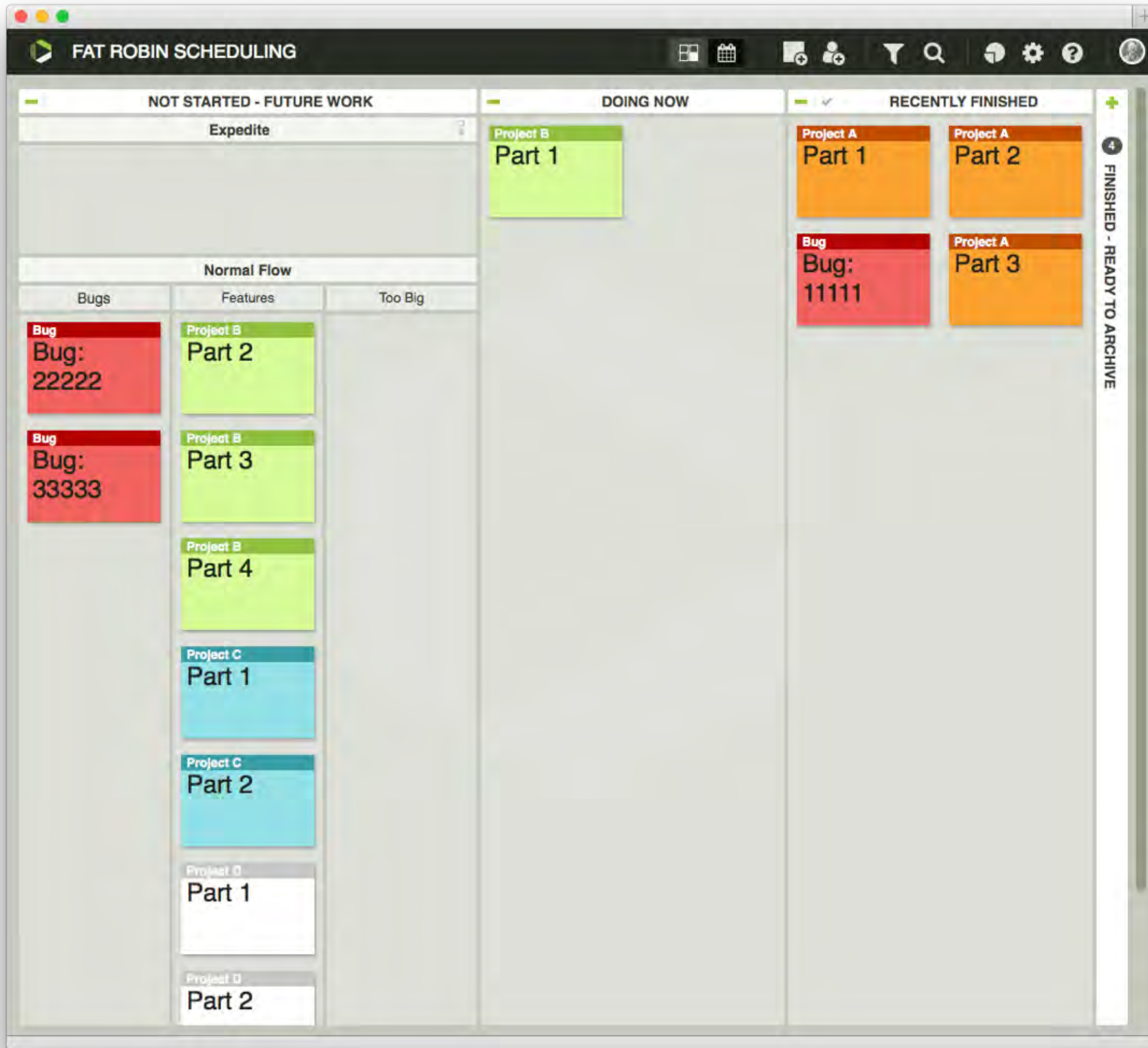


Round Robin Scheduling

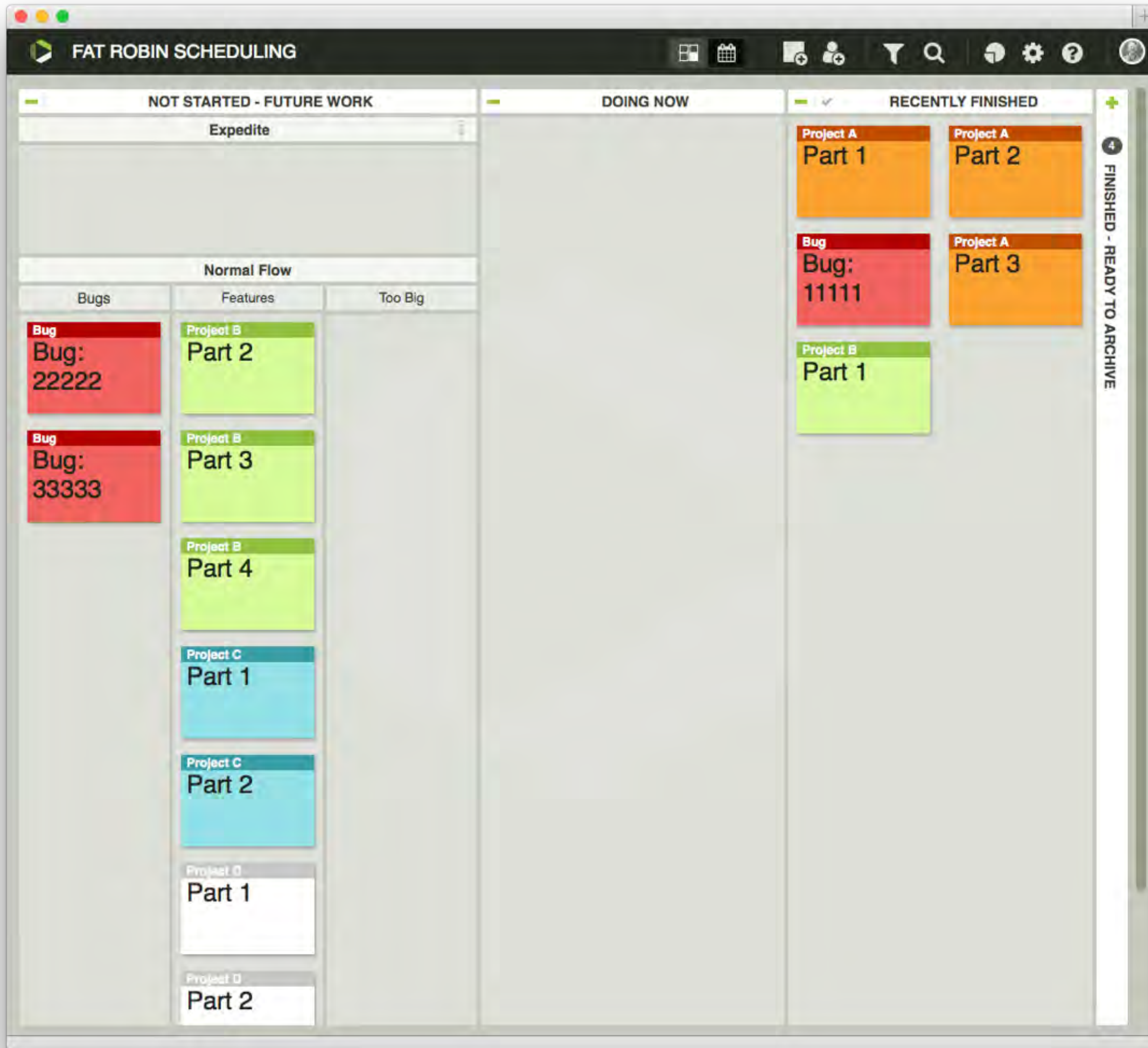


Round Robin Scheduling

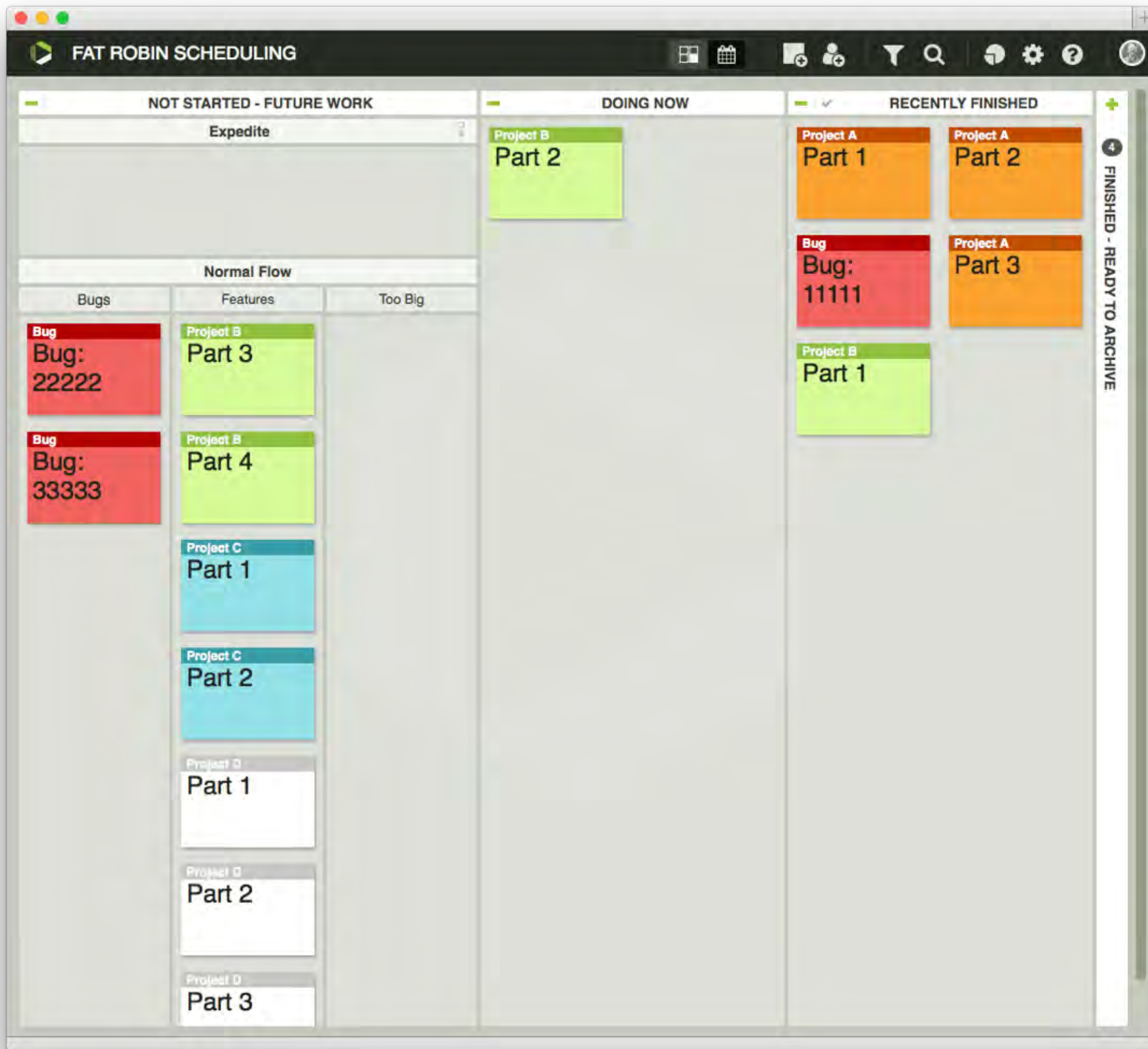
- What next?
 - Project B?
 - Bugs?
 - Maybe Project C?
 - Your choice!



Round Robin Scheduling



Round Robin Scheduling

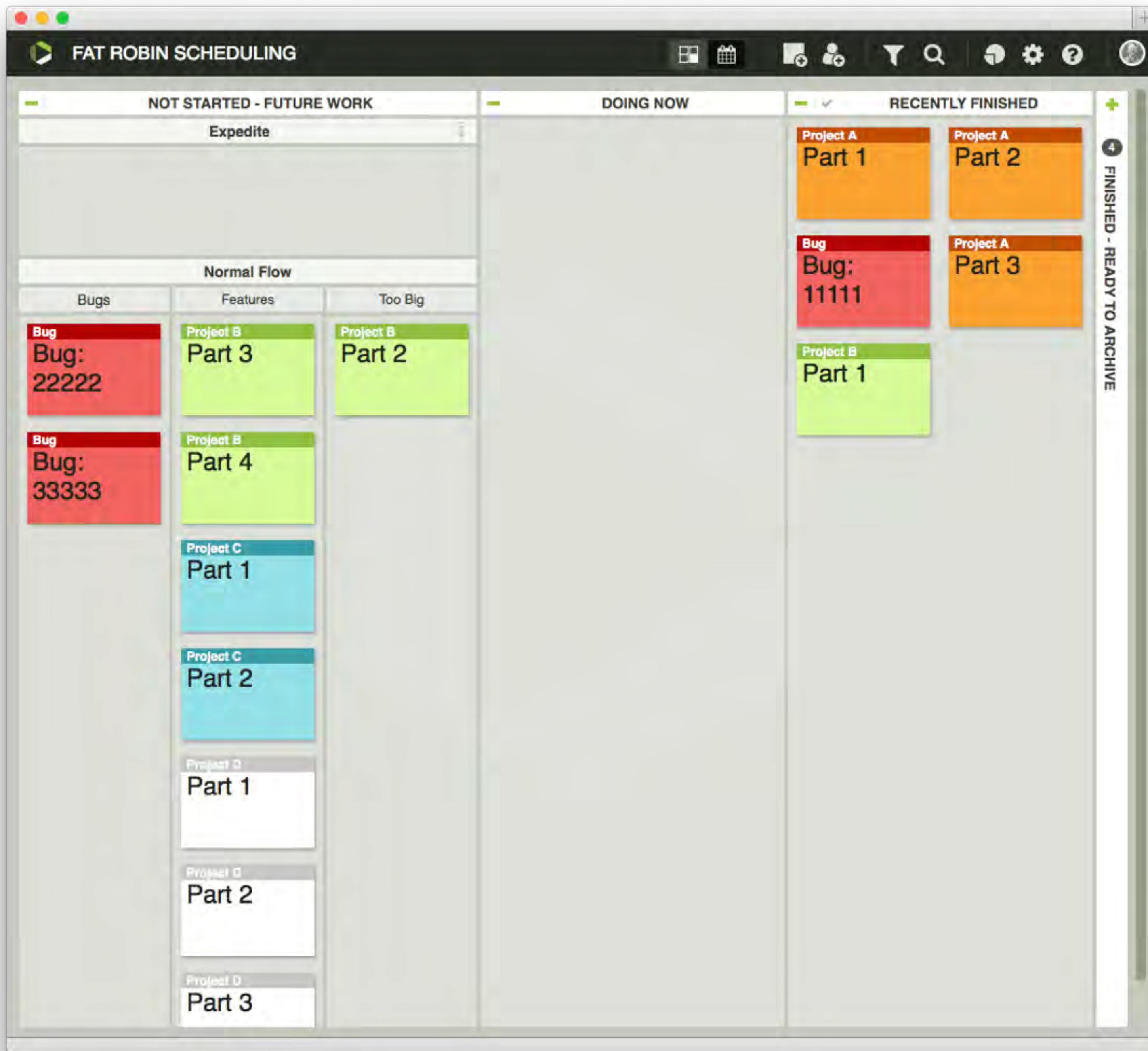


Round Robin Scheduling

- Oh no. Project B Part 2 is taking too long.
- Too big!
- Too fat!

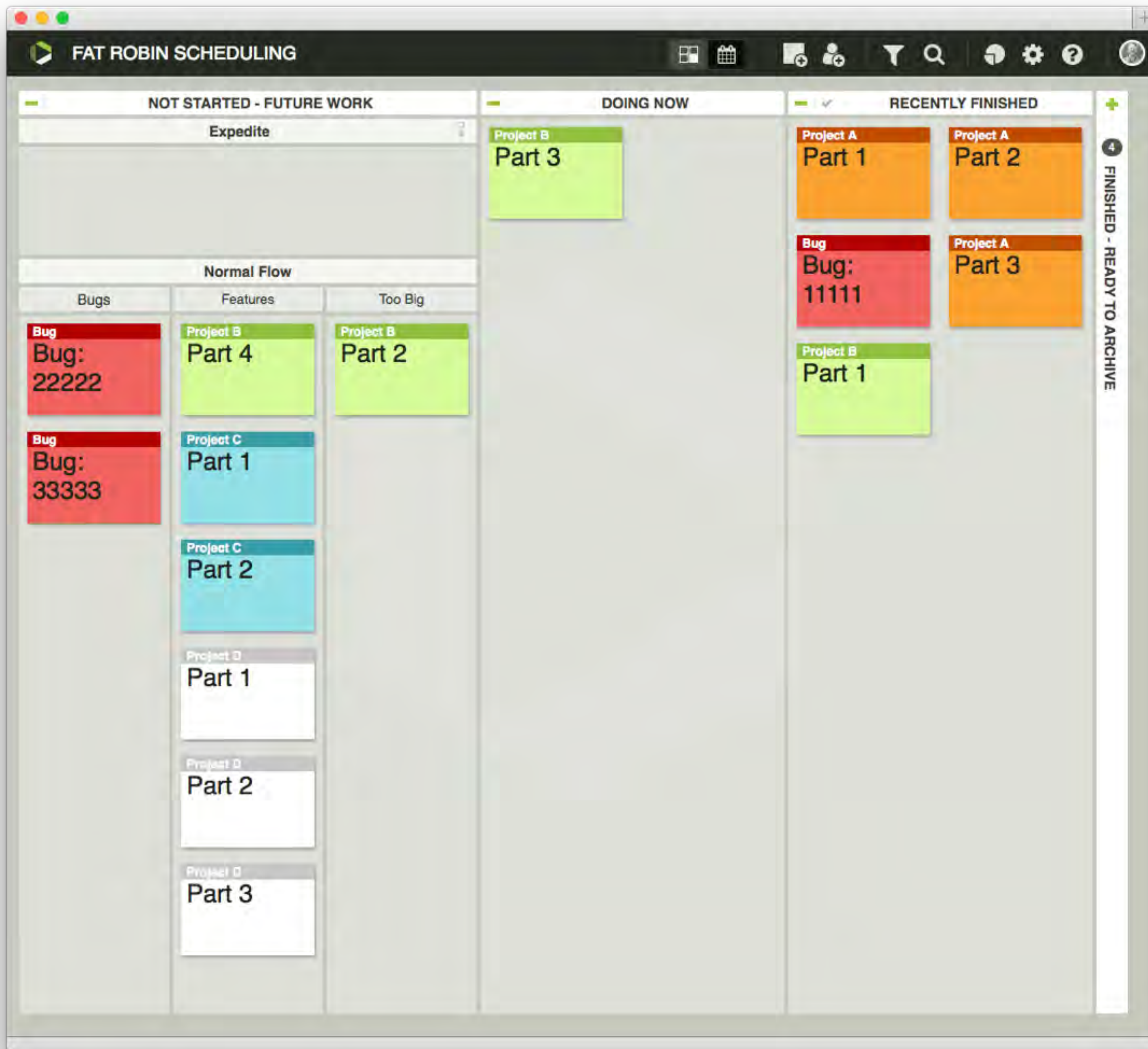
Stop Digging





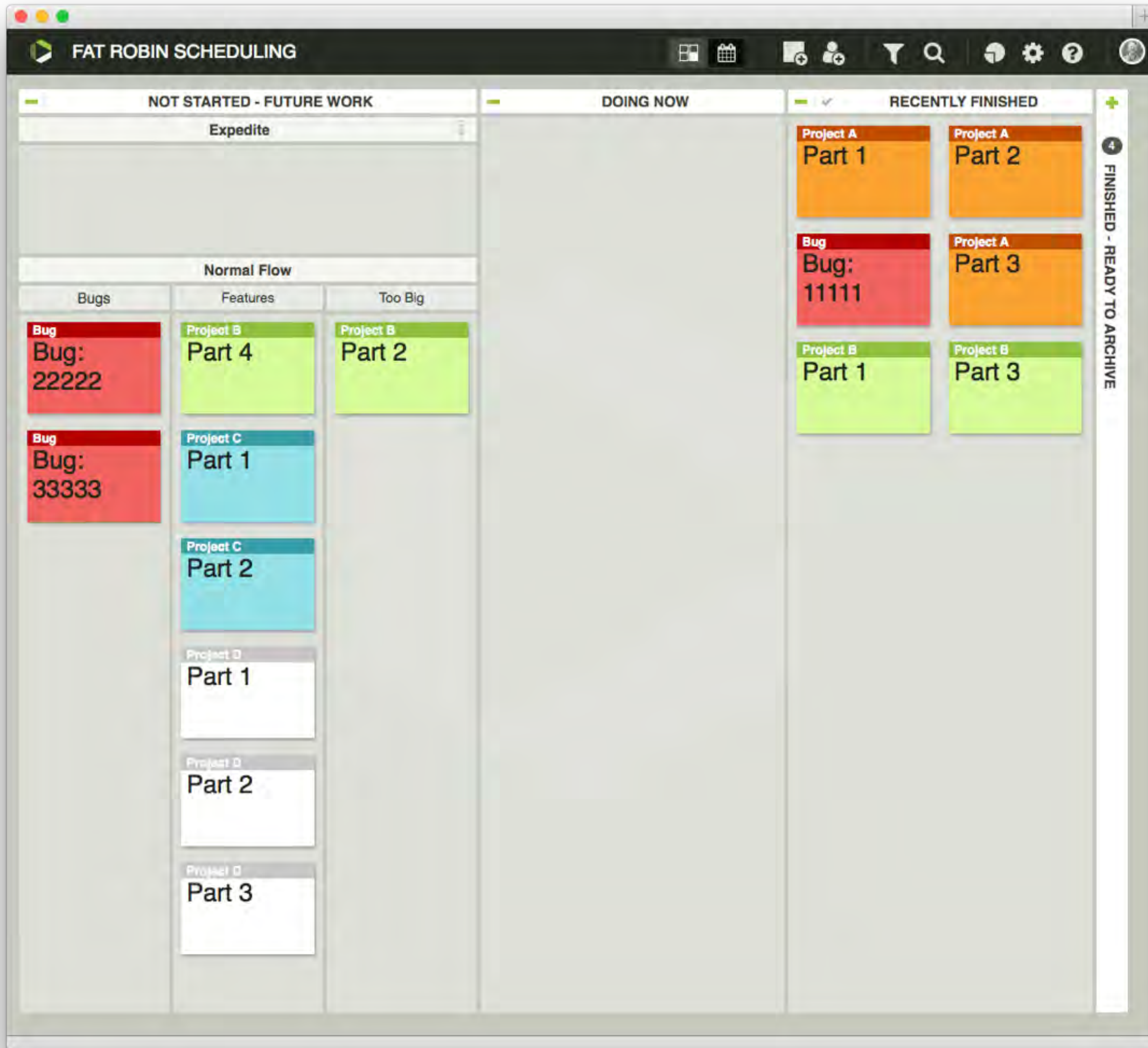
Round Fat Robin Scheduling

- Move it aside
- Choose next priority

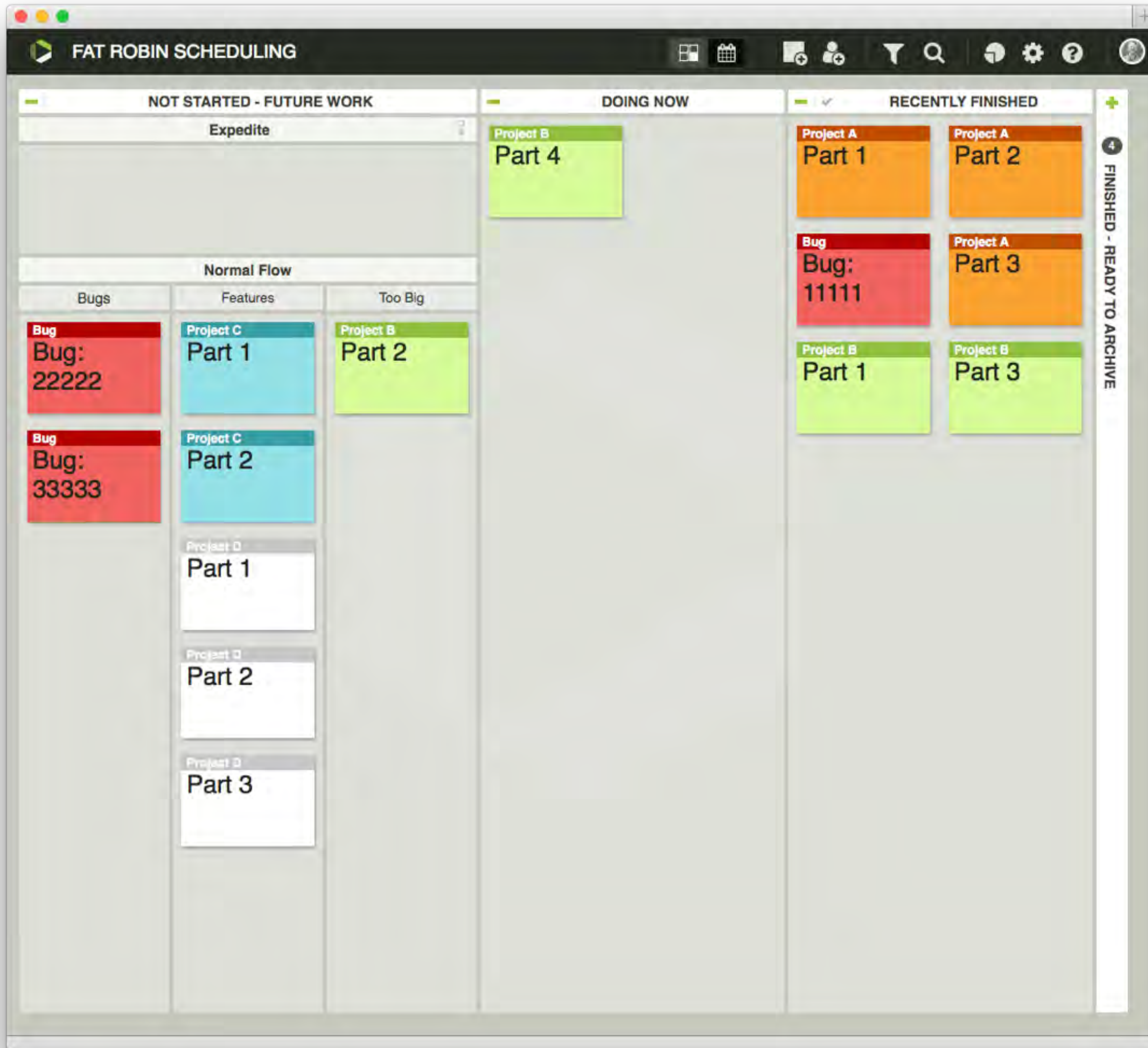


Fat Robin Scheduling

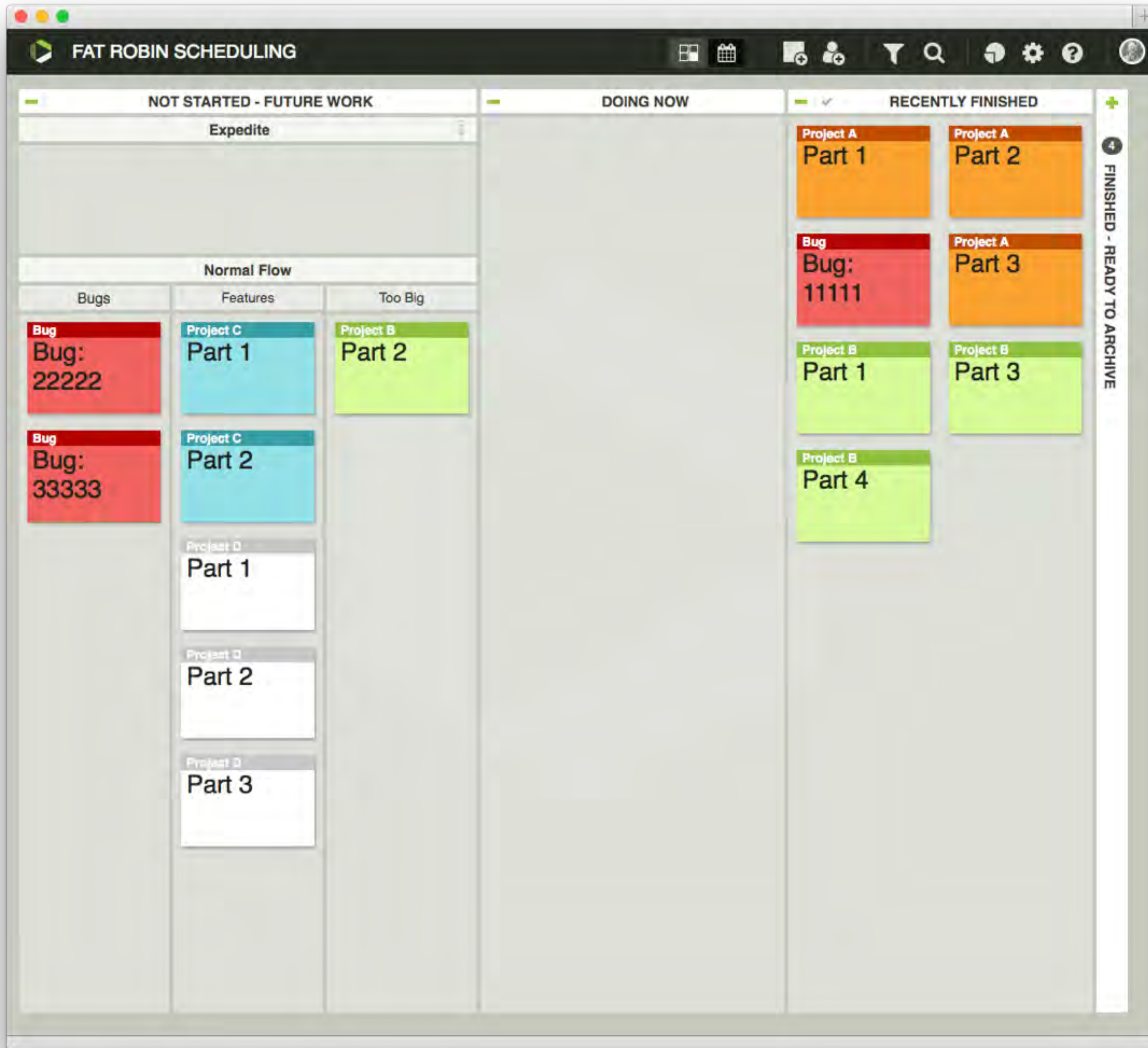
- Small & Decoupled allow us to complete, and gain value from, other portions of the project



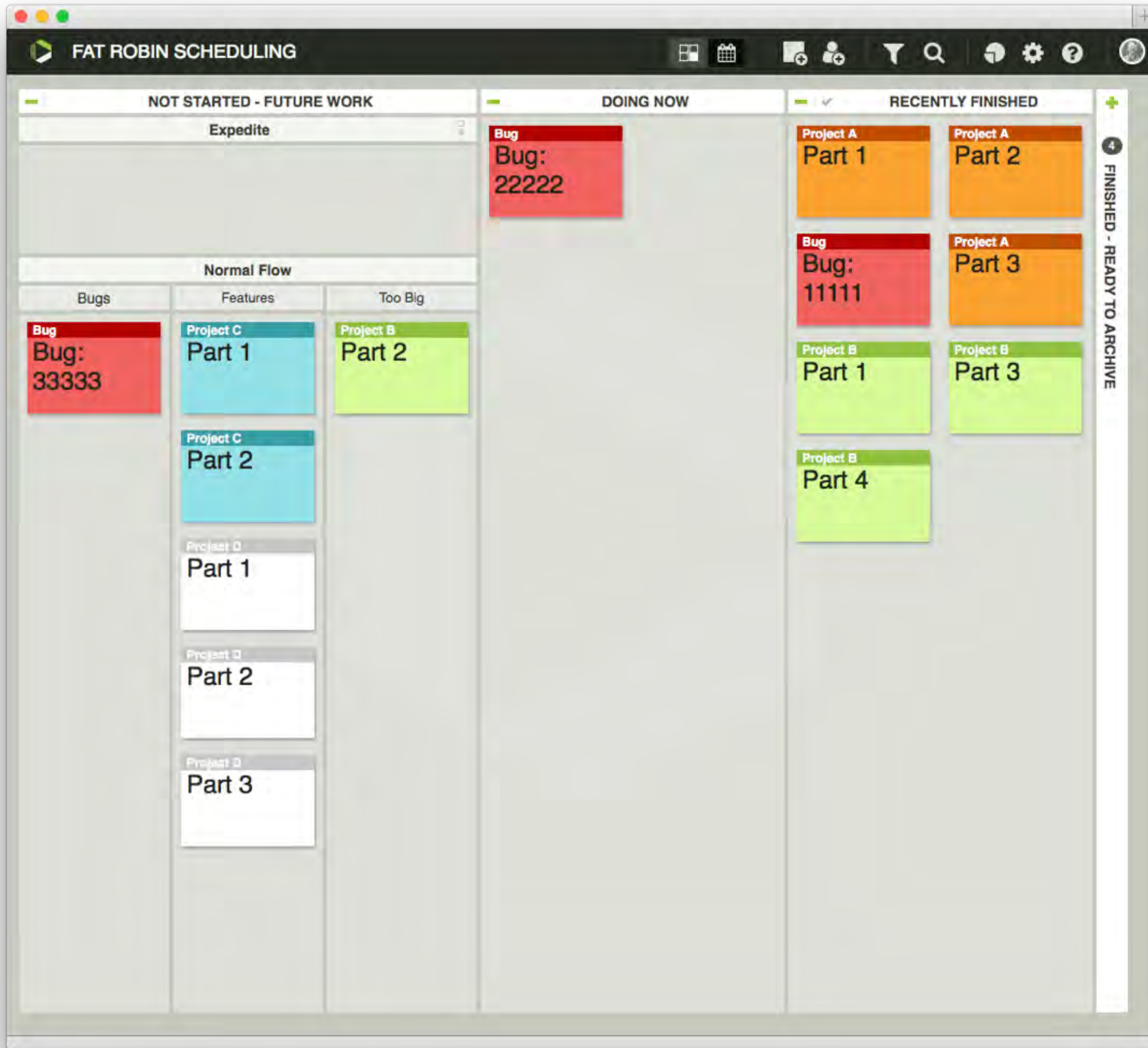
Fat Robin Scheduling



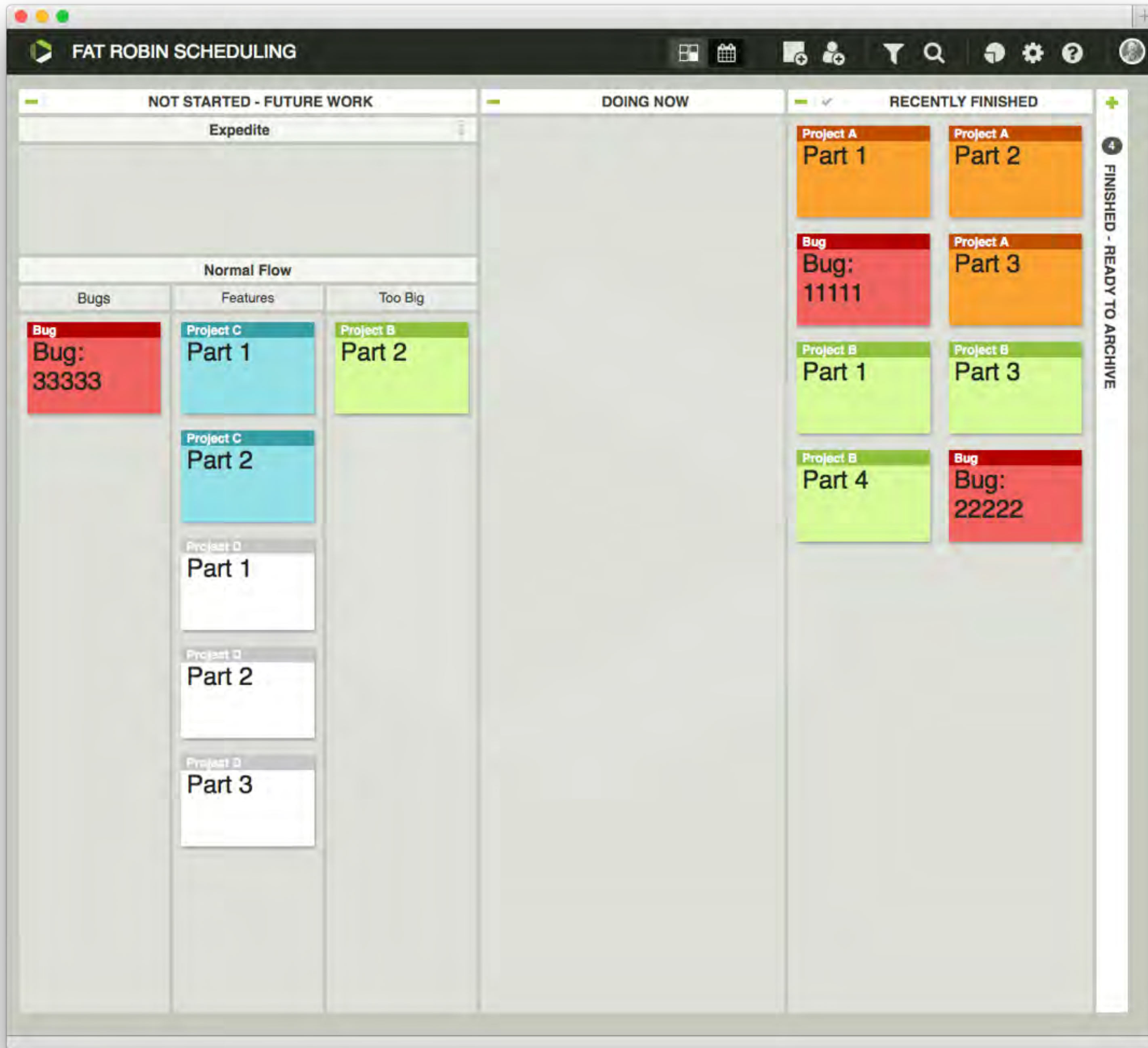
Fat Robin Scheduling



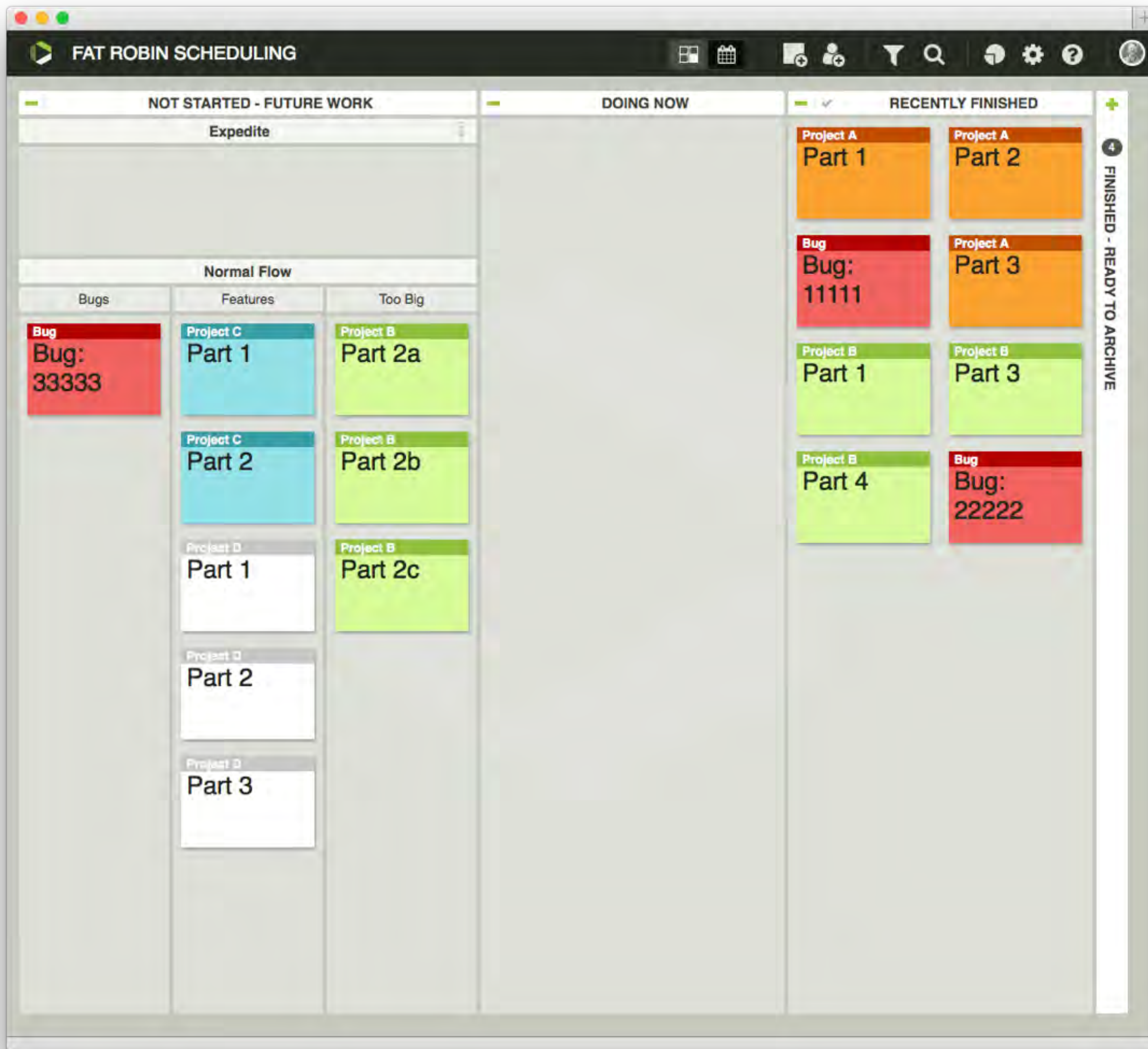
Fat Robin Scheduling



Fat Robin Scheduling

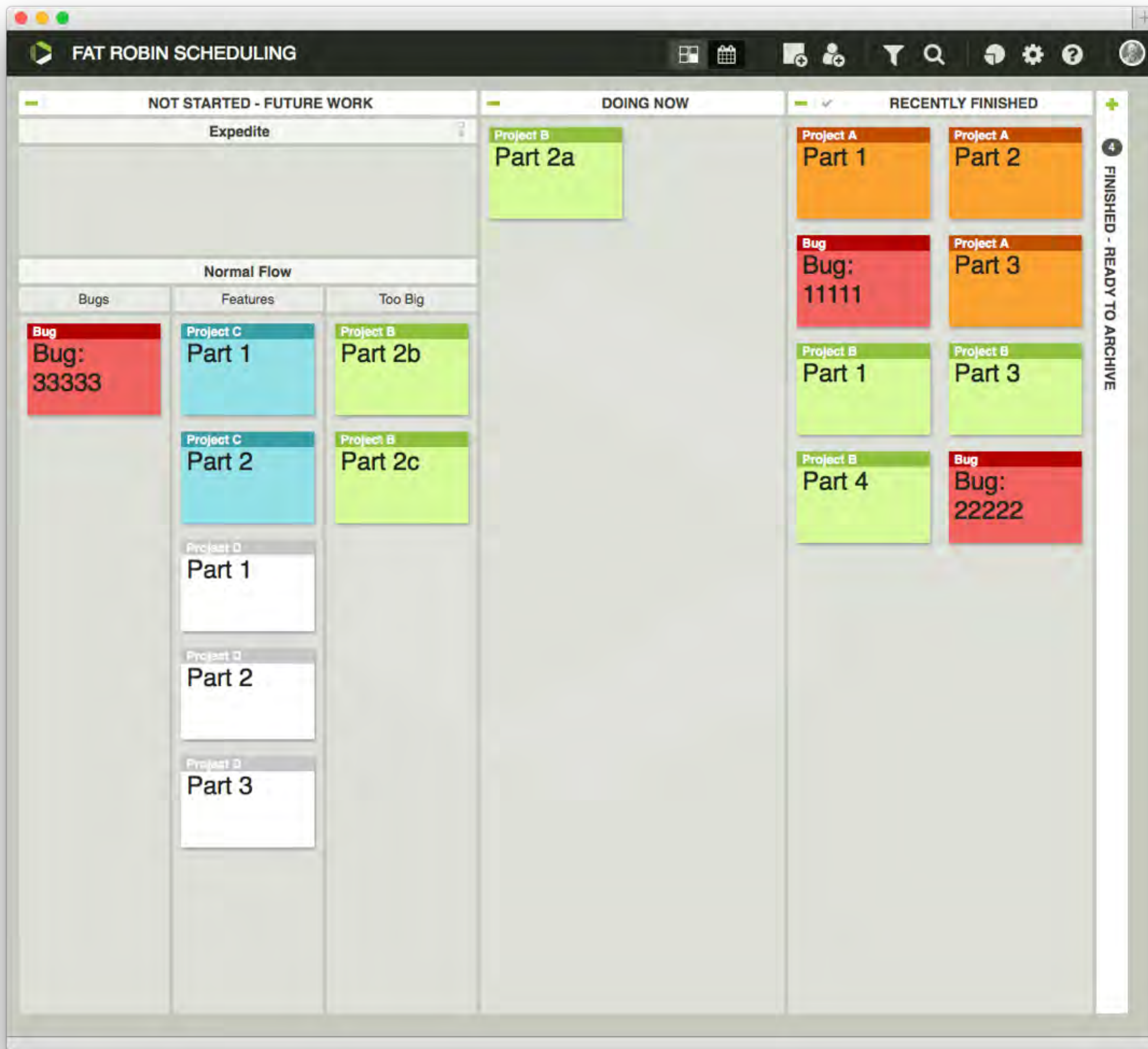


Fat Robin Scheduling



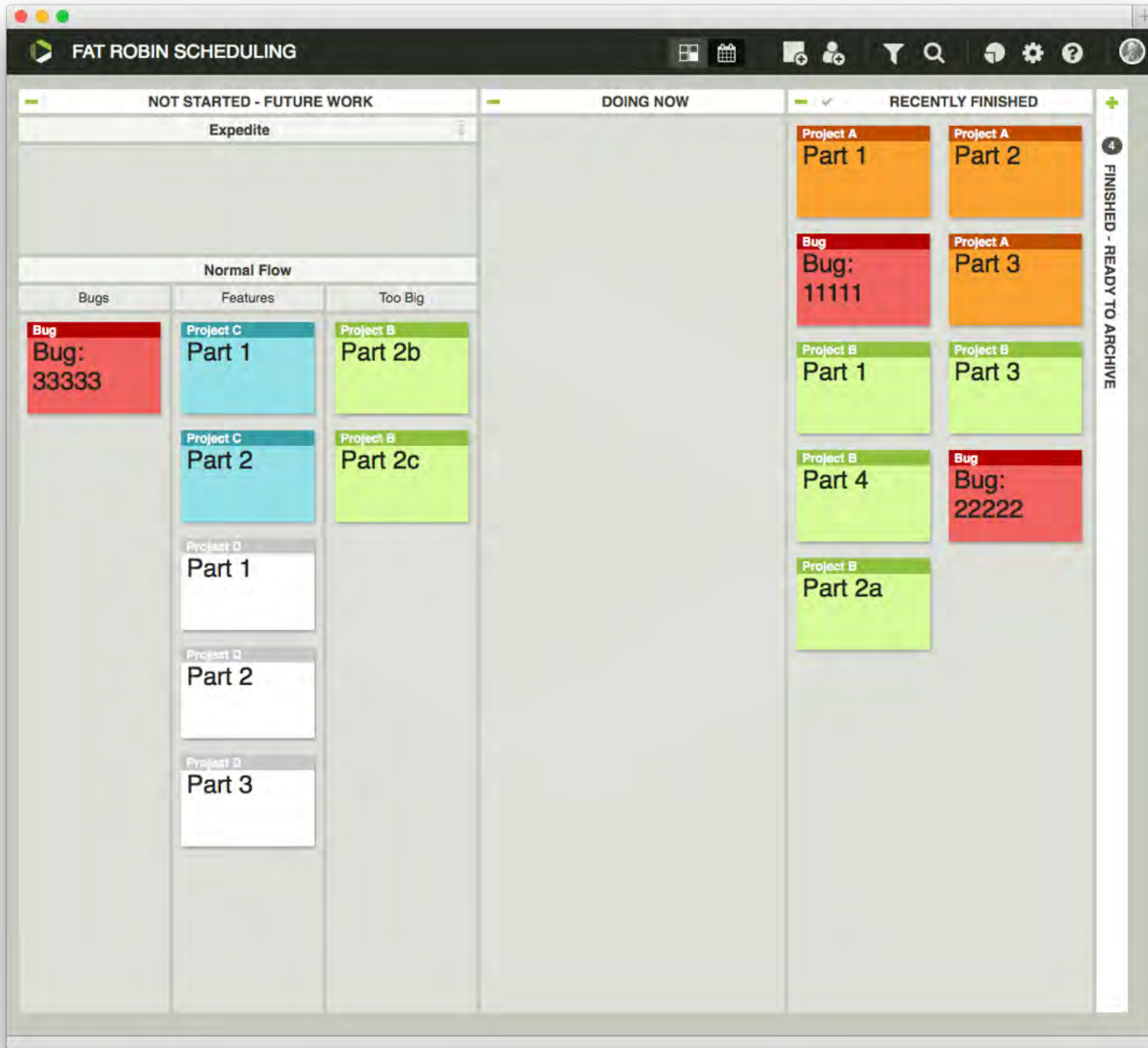
Fat Robin Scheduling

- Back to that fat robin
- Break him up into smaller pieces

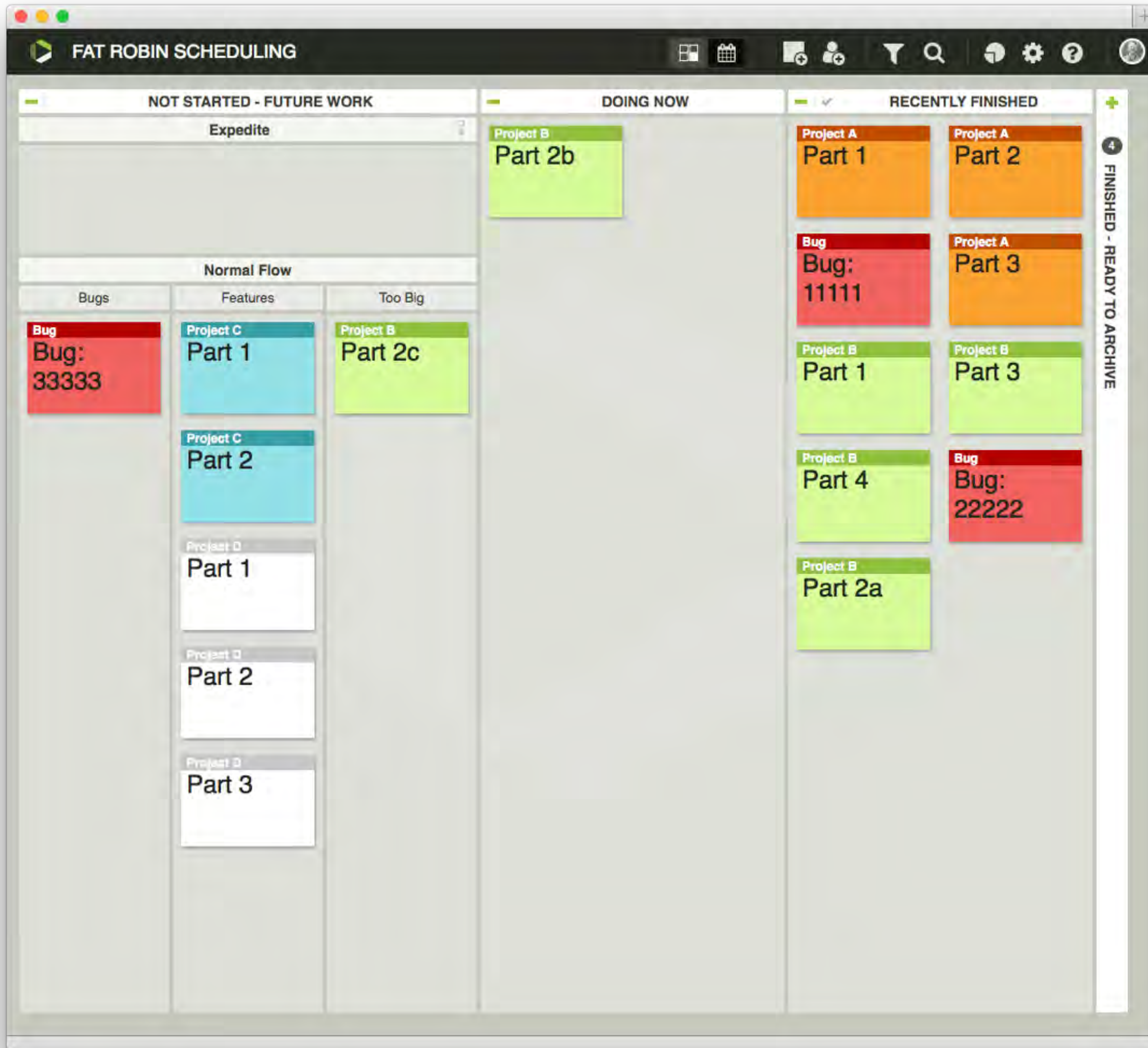


Fat Robin Scheduling

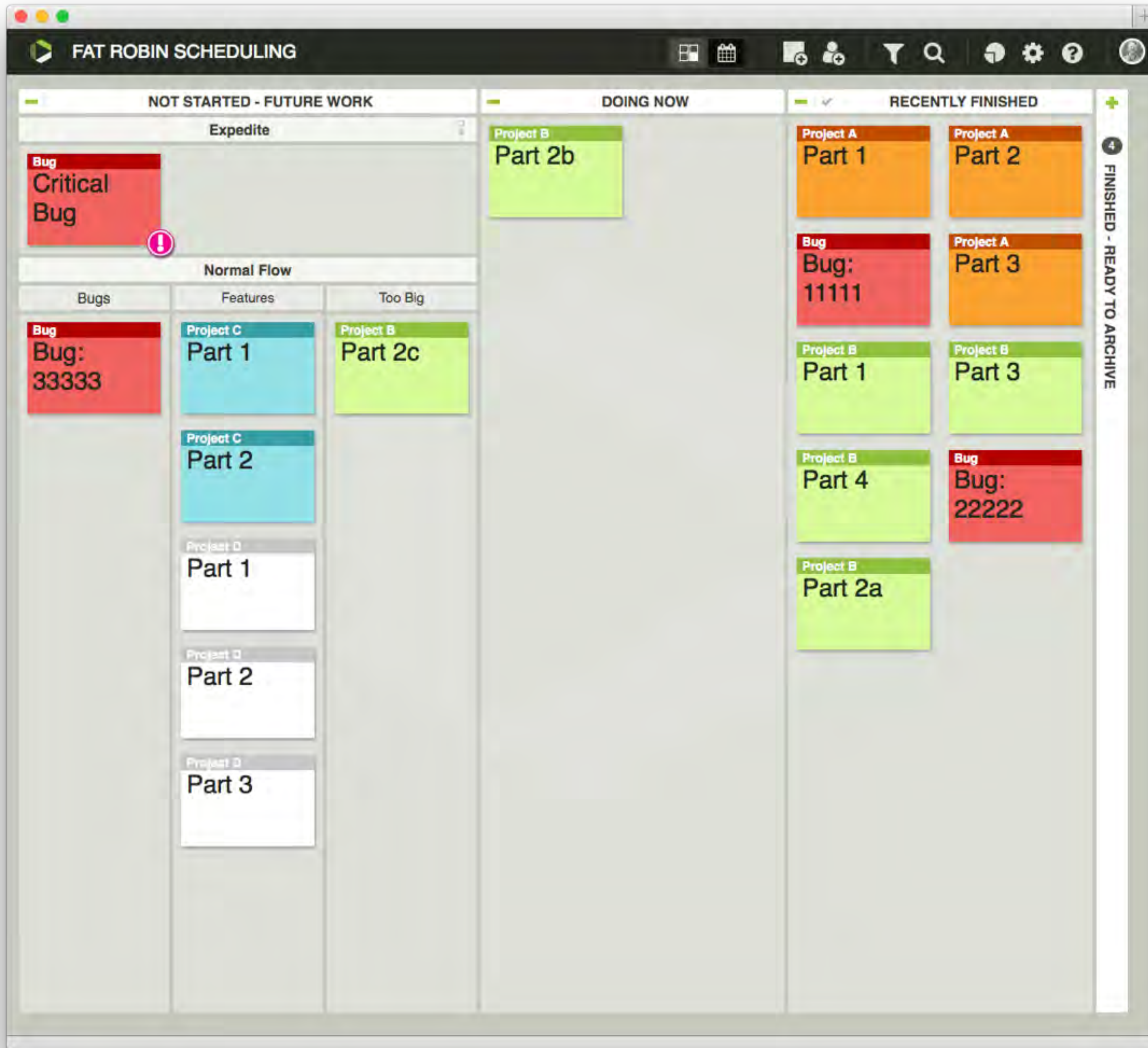
- Flow as usual



Fat Robin Scheduling

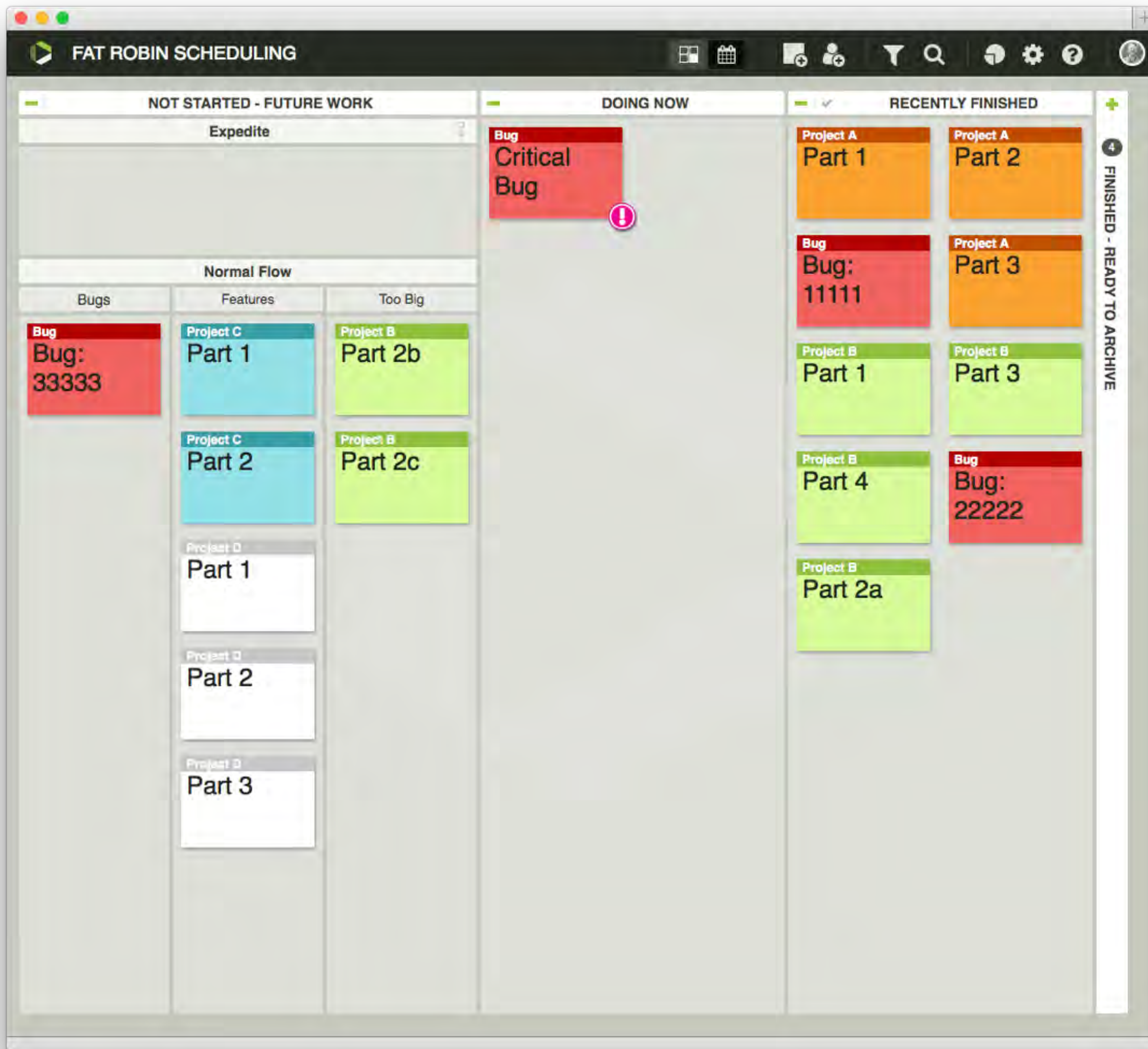


Fat Robin Scheduling



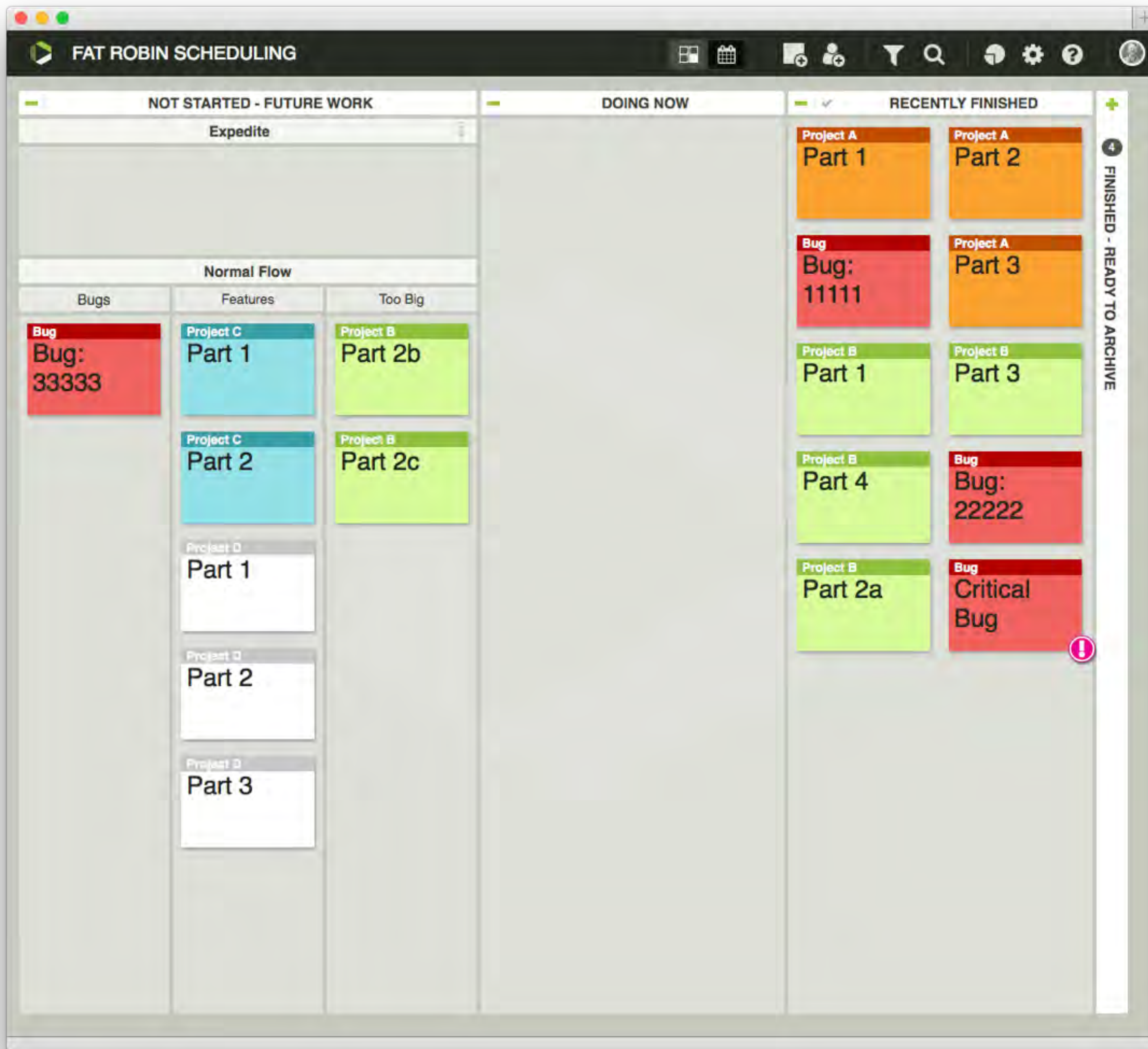
Fat Robin Scheduling

- What about critical issues?



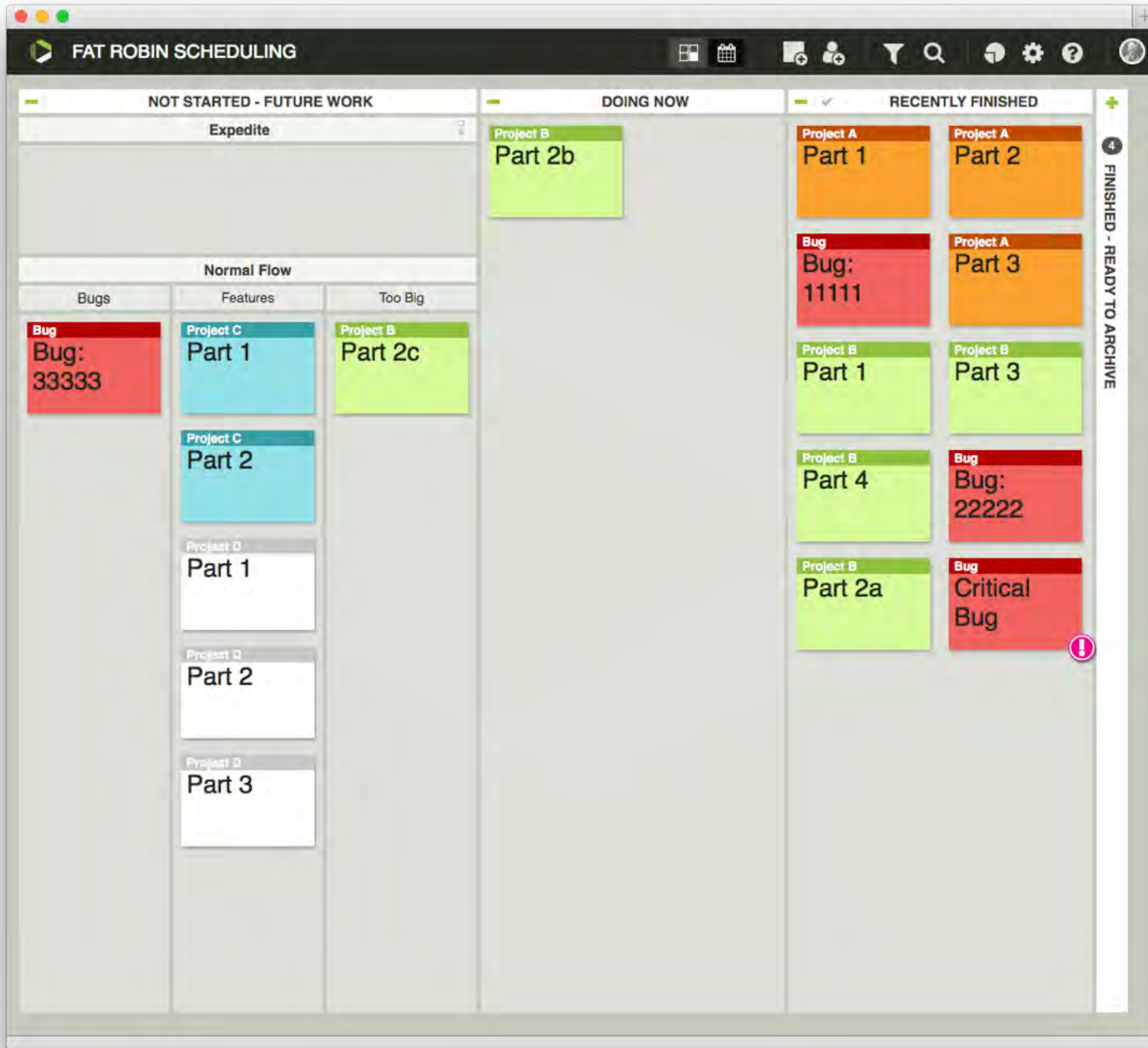
Fat Robin Scheduling

- Stop the line
- Tools down on other work
- Do not simply add more work to the team

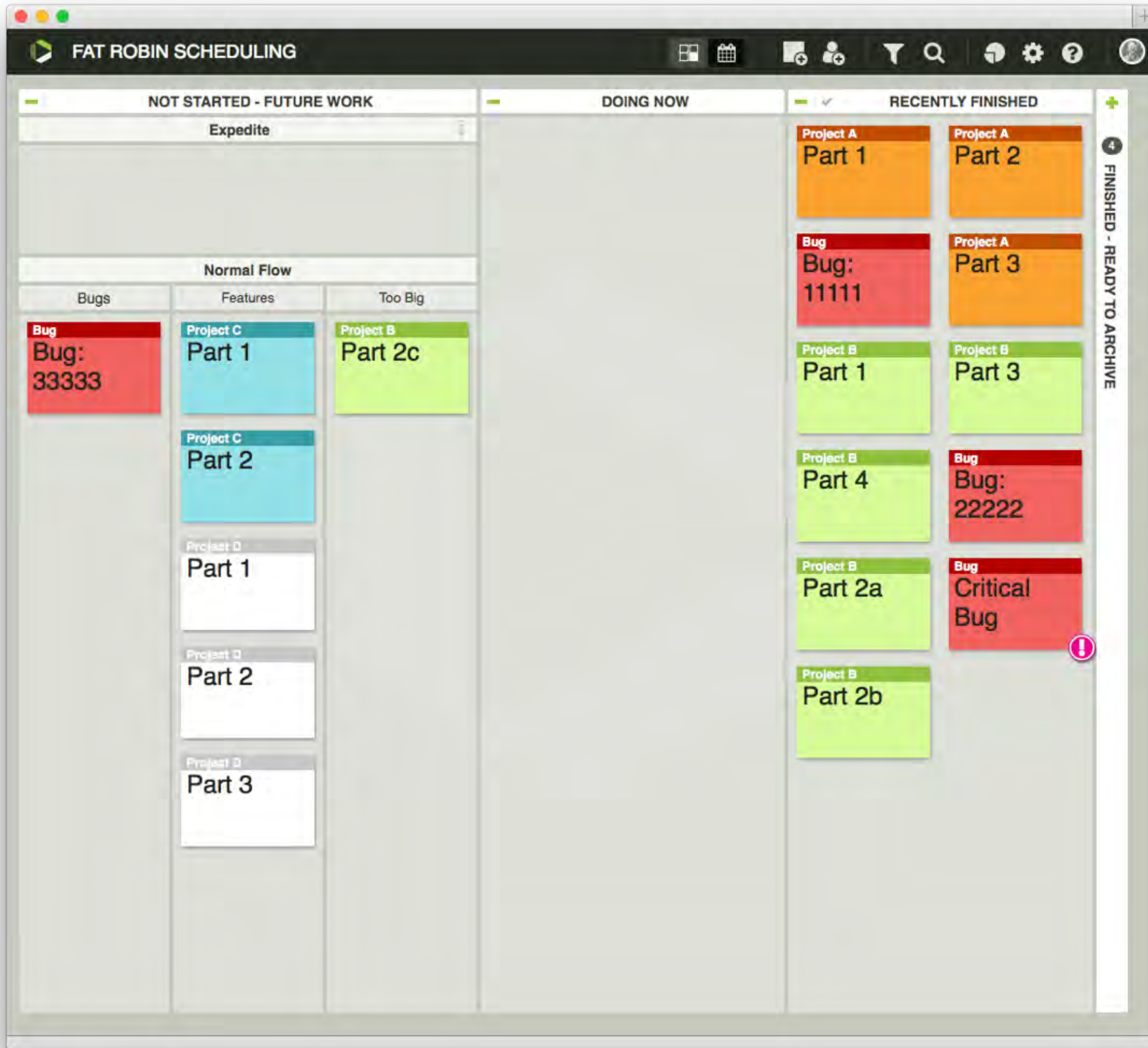


Fat Robin Scheduling

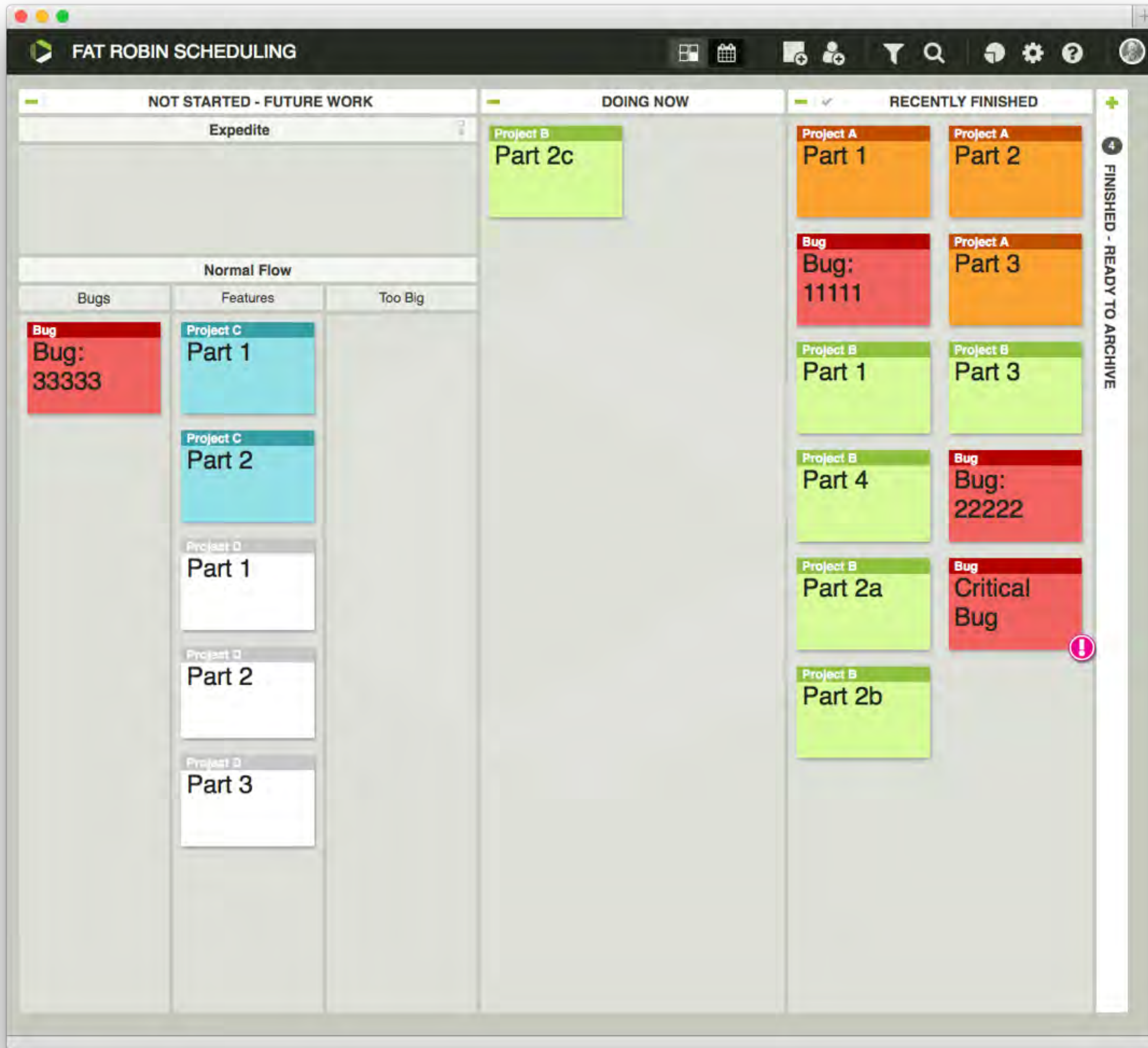
- Critical issue resolved, back to usual flow



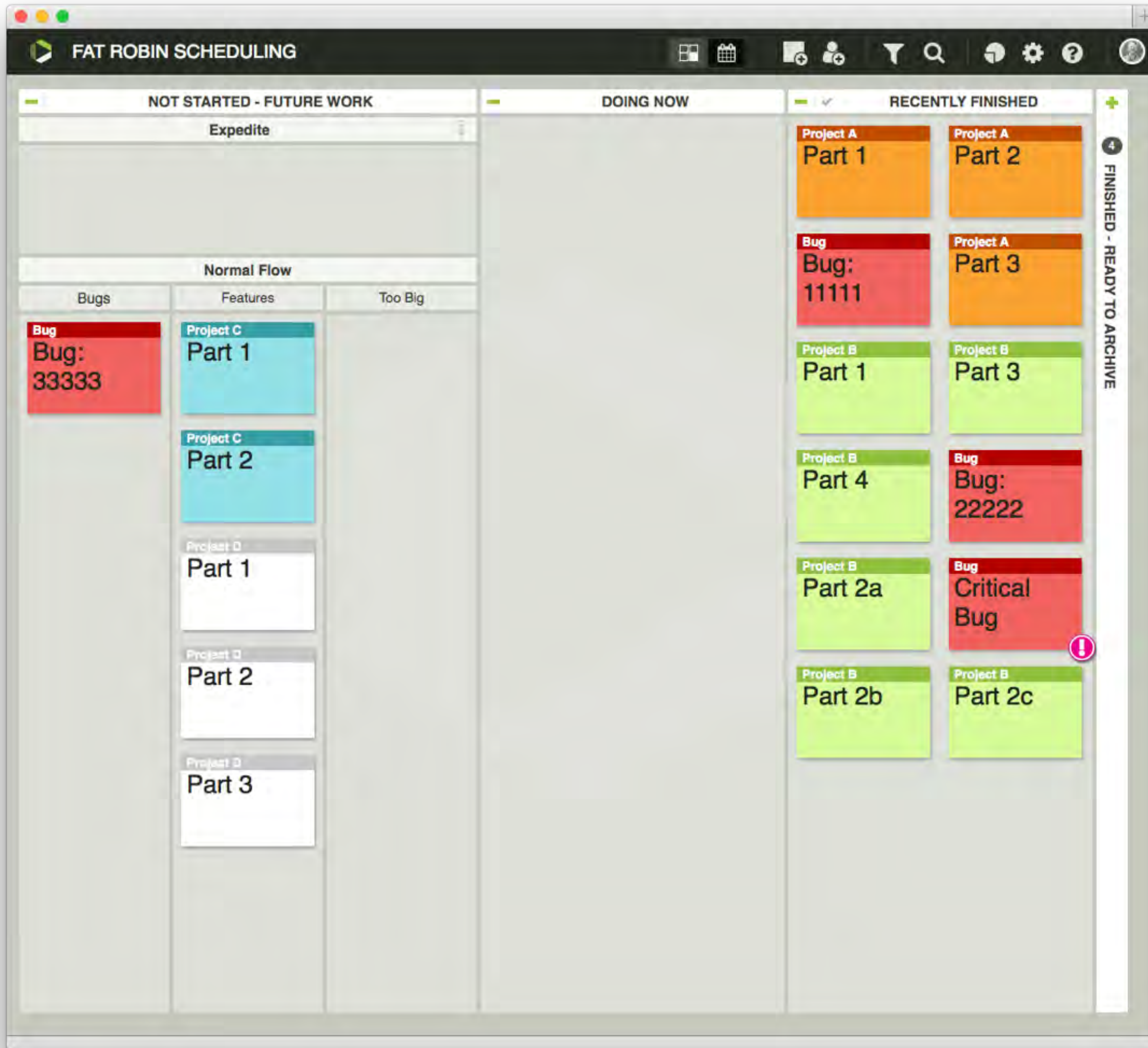
Fat Robin Scheduling



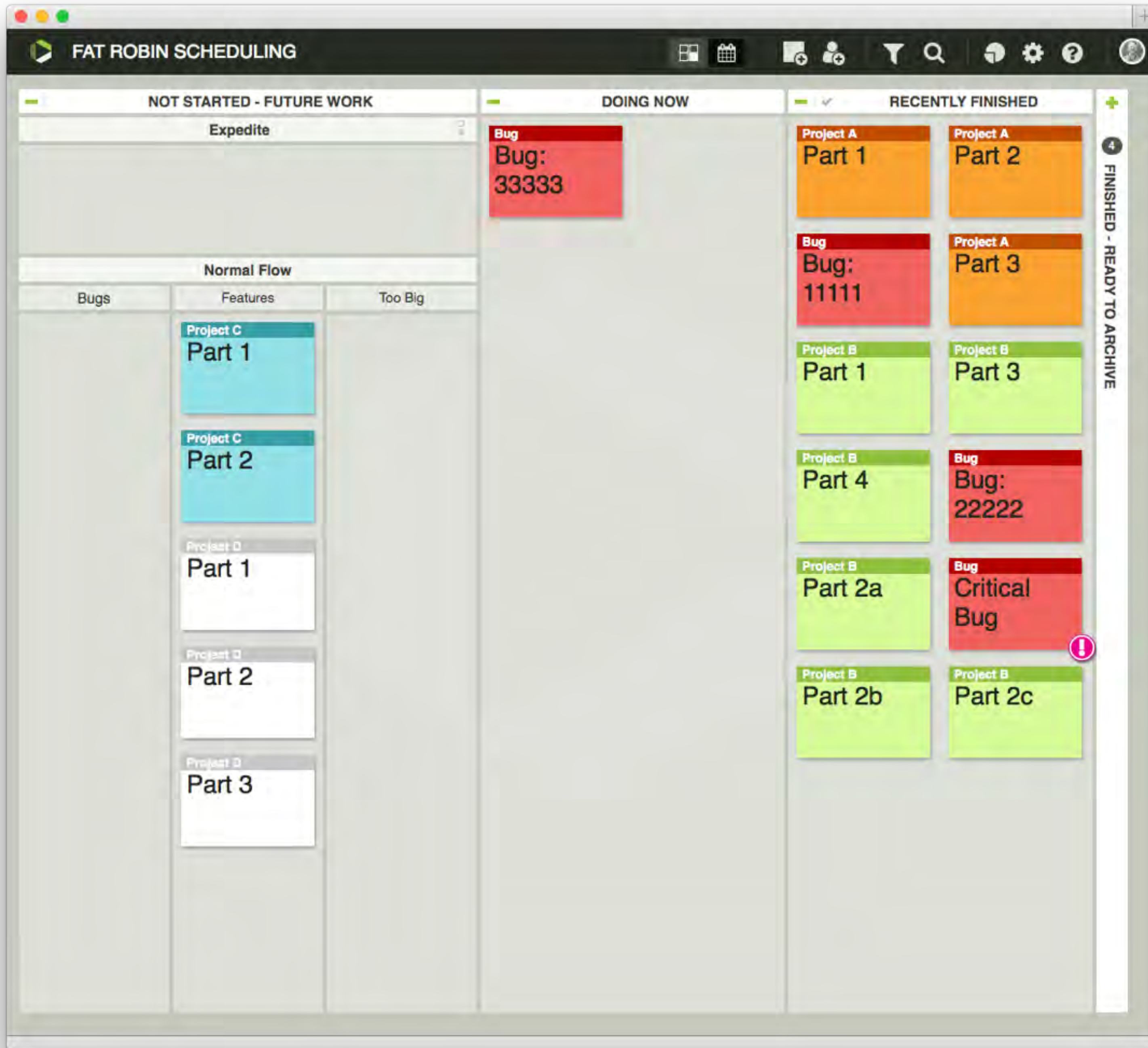
Fat Robin Scheduling



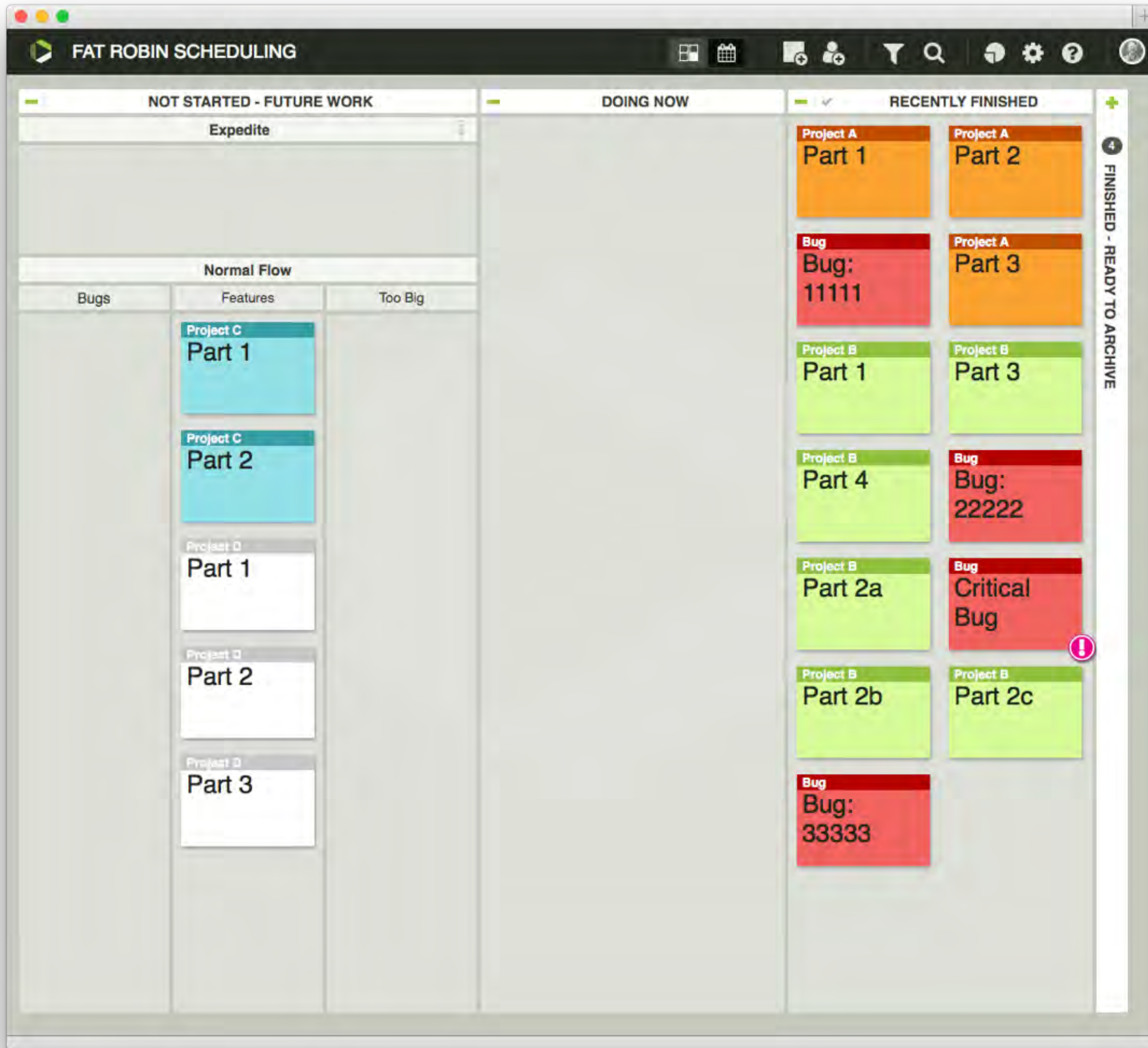
Fat Robin Scheduling



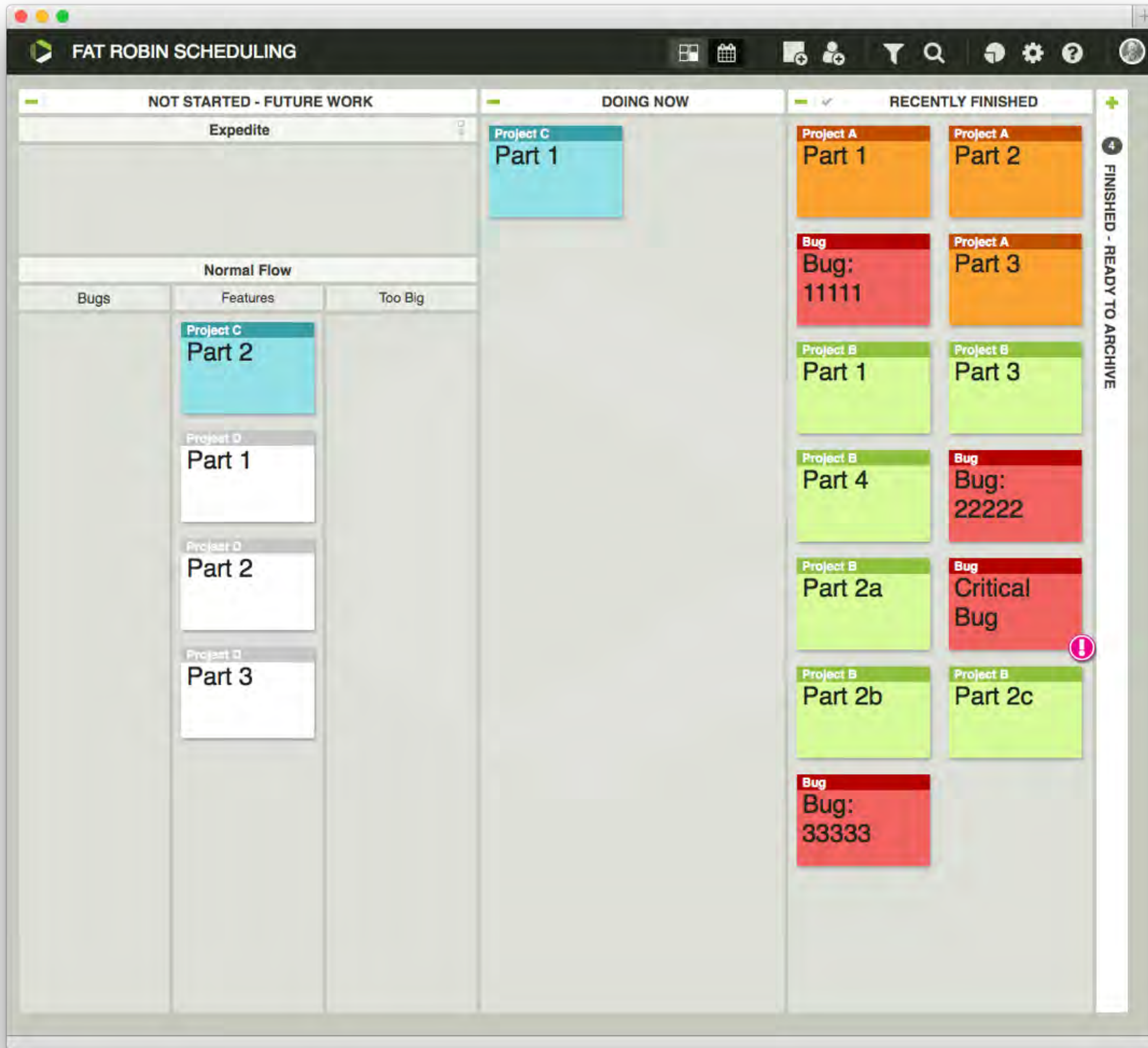
Fat Robin Scheduling



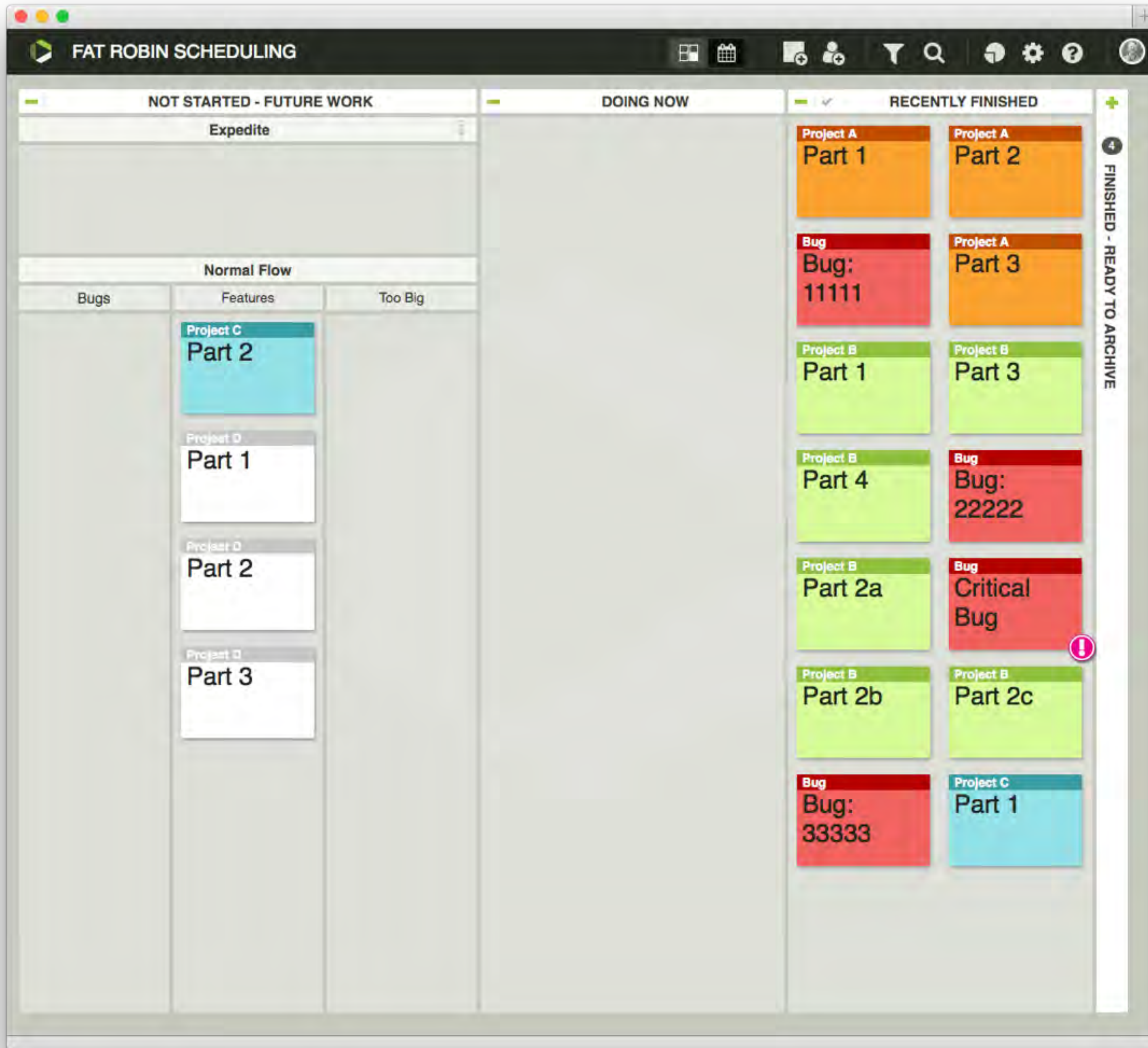
Fat Robin Scheduling



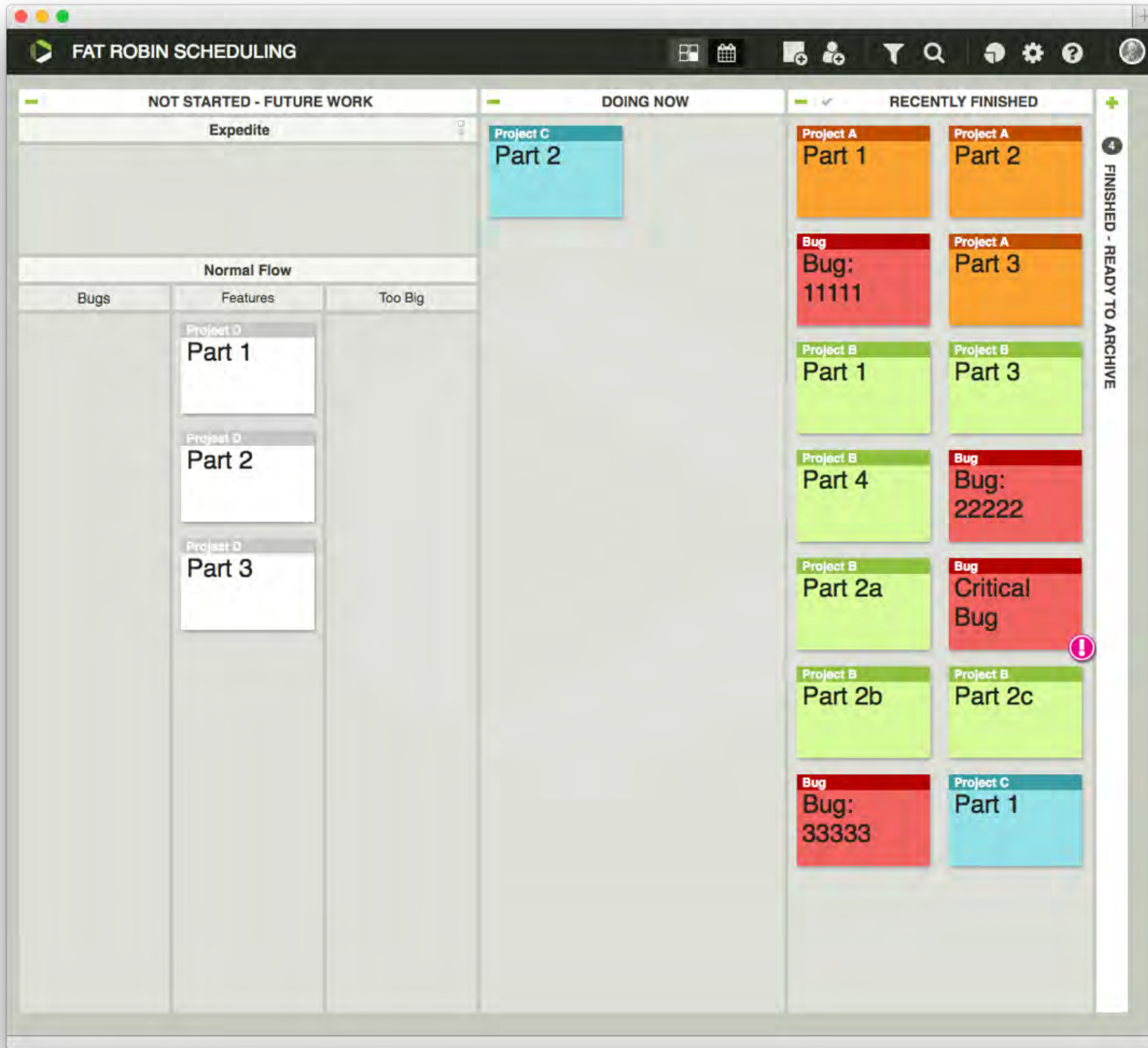
Fat Robin Scheduling



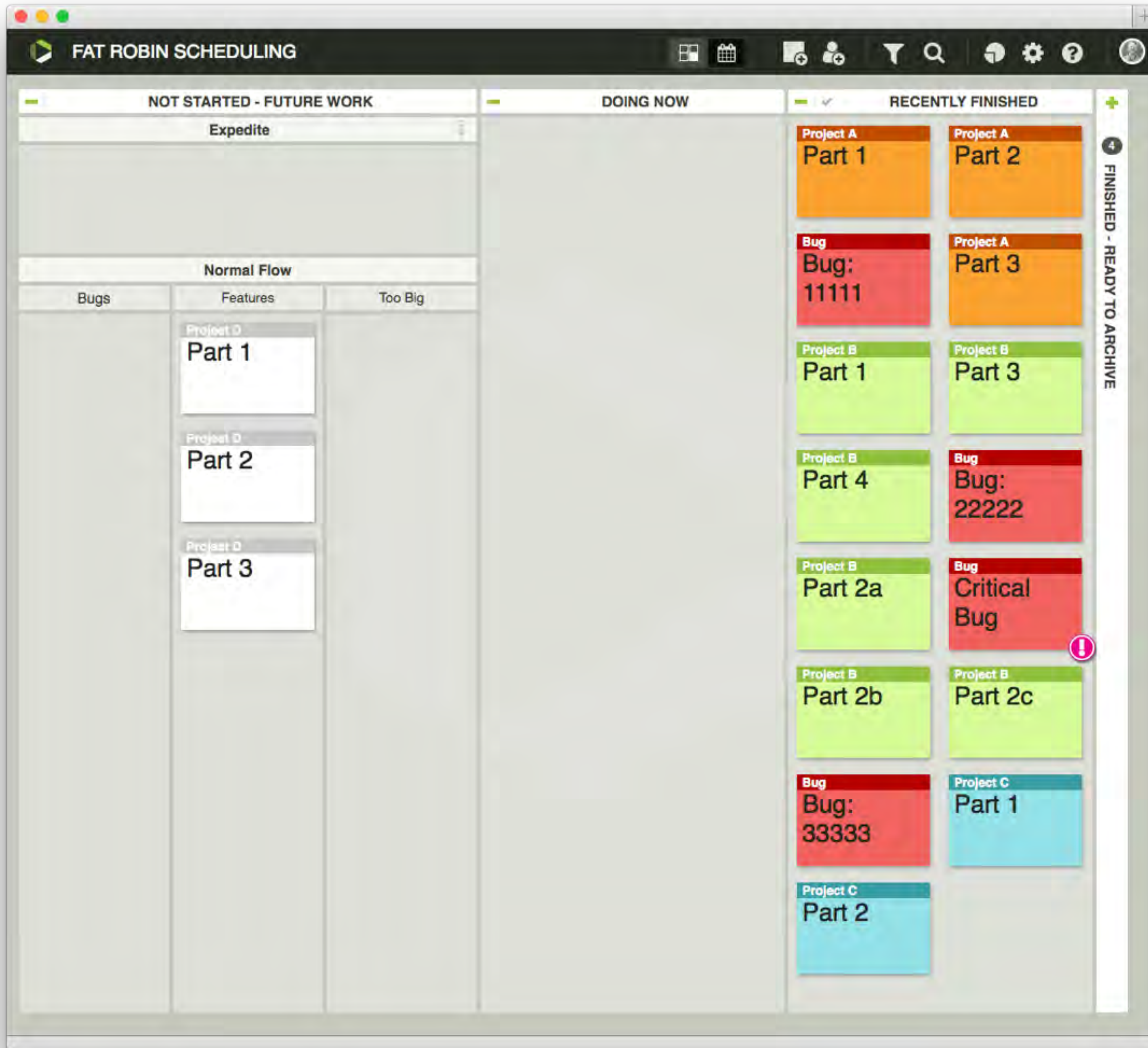
Fat Robin Scheduling



Fat Robin Scheduling



Fat Robin Scheduling



Fat Robin Scheduling

Frequent

Small

Good

Decoupled

Garbage

Tested
Logged
Documented
Reviewed



@ifandelse
github.com/ifandelse

Frequent

Small

Good

Decoupled

Garbage

Gold-plated

If you are not
embarrassed by the
first version of your
product, you've
launched too late.

Startup Quote!



REID HOFFMAN

FOUNDER, LINKEDIN





Cut, copy and paste

Works across apps

Undo support

Developer API

Cocoa Touch support for text



Frequent

Small

Good

Decoupled Coordinated

Releasing a New Feature

**Sales
Team**



**Marketing
Team**



**Browser
Team**



**Mobile
Team**



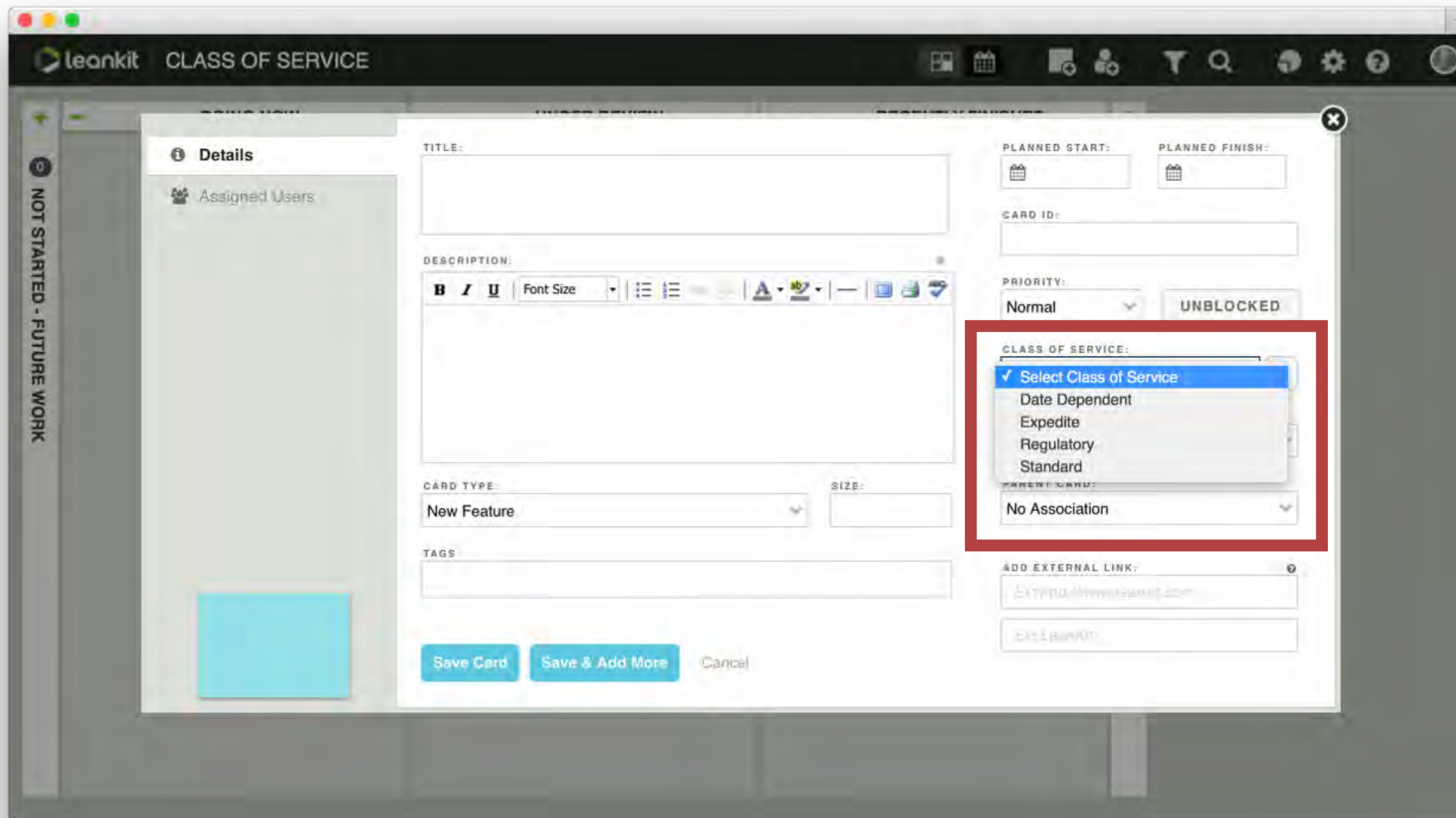
**API
Team**





Decoupled Coordinated

Example: Custom Icons



The screenshot shows the LeanKit 'CLASS OF SERVICE' form. The form includes fields for TITLE, DESCRIPTION (with a rich text editor), PLANNED START, PLANNED FINISH, CARD ID, PRIORITY (set to Normal), UNBLOCKED, CLASS OF SERVICE (with a dropdown menu open), PARENT CARD (set to No Association), ADD EXTERNAL LINK, and TAGS. The dropdown menu for CLASS OF SERVICE is highlighted with a red box and contains the following options: Select Class of Service (checked), Date Dependent, Expedite, Regulatory, Standard, and No Association. The form also has buttons for Save Card, Save & Add More, and Cancel. A sidebar on the left indicates 'NOT STARTED - FUTURE WORK'.

leankit CLASS OF SERVICE

Details

Assigned Users

TITLE:

DESCRIPTION:

Font Size

PLANNED START:

PLANNED FINISH:

CARD ID:

PRIORITY: Normal

UNBLOCKED

CLASS OF SERVICE:

- ✓ Select Class of Service
- Date Dependent
- Expedite
- Regulatory
- Standard

PARENT CARD: No Association

ADD EXTERNAL LINK:

Save Card Save & Add More Cancel

Example: Custom Icons

CLASS OF SERVICE

DETAILS

Assigned Users

TITLE:

DESCRIPTION:

CARD TYPE:

SIZE:

TAGS:

PLANNED START:

PLANNED FINISH:

CARD ID:

PRIORITY:

UNBLOCKED

CLASS OF SERVICE:

- ✓ Select Class of Service
- Date Dependent
- Expedite
- Regulatory
- Standard
- No Association

ADD EXTERNAL LINK:

Save Card Save & Add More Cancel

SATISFACTION

DETAILS

Assigned Users

TITLE:

DESCRIPTION:

CARD TYPE:

SIZE:

TAGS:

PLANNED START:

PLANNED FINISH:

CARD ID:

PRIORITY:

UNBLOCKED

SATISFACTION:

- ✓ Select Satisfaction
- Concerned
- Content
- Happy
- Unhappy
- No Association

ADD EXTERNAL LINK:

Save Card Save & Add More Cancel

Example: Custom Icons

New field in the database, prepopulated ... SHIP IT!

The screenshot shows the LeanKit 'CLASS OF SERVICE' form. The form is titled 'CLASS OF SERVICE' and has a sidebar on the left with a 'Details' section and an 'Assigned Users' section. The main form area contains several fields: 'TITLE:', 'DESCRIPTION:', 'CARD TYPE:', 'TAGS:', 'PLANNED START:', 'PLANNED FINISH:', 'CARD ID:', 'PRIORITY:', 'CLASS OF SERVICE:', 'PARENT CARD:', and 'ADD EXTERNAL LINK:'. The 'CLASS OF SERVICE' dropdown menu is open, showing the following options: 'Select Class of Service' (selected), 'Date Dependent', 'Expedite', 'Regulatory', and 'Standard'. The 'CARD TYPE' is set to 'New Feature'. The 'PRIORITY' is set to 'Normal'. The 'PARENT CARD' is set to 'No Association'. The 'ADD EXTERNAL LINK' field contains the URL 'http://www.leankit.com'. The form has three buttons at the bottom: 'Save Card', 'Save & Add More', and 'Cancel'.

Example: Custom Icons

Use that to relabel UI in browser ... SHIP IT!

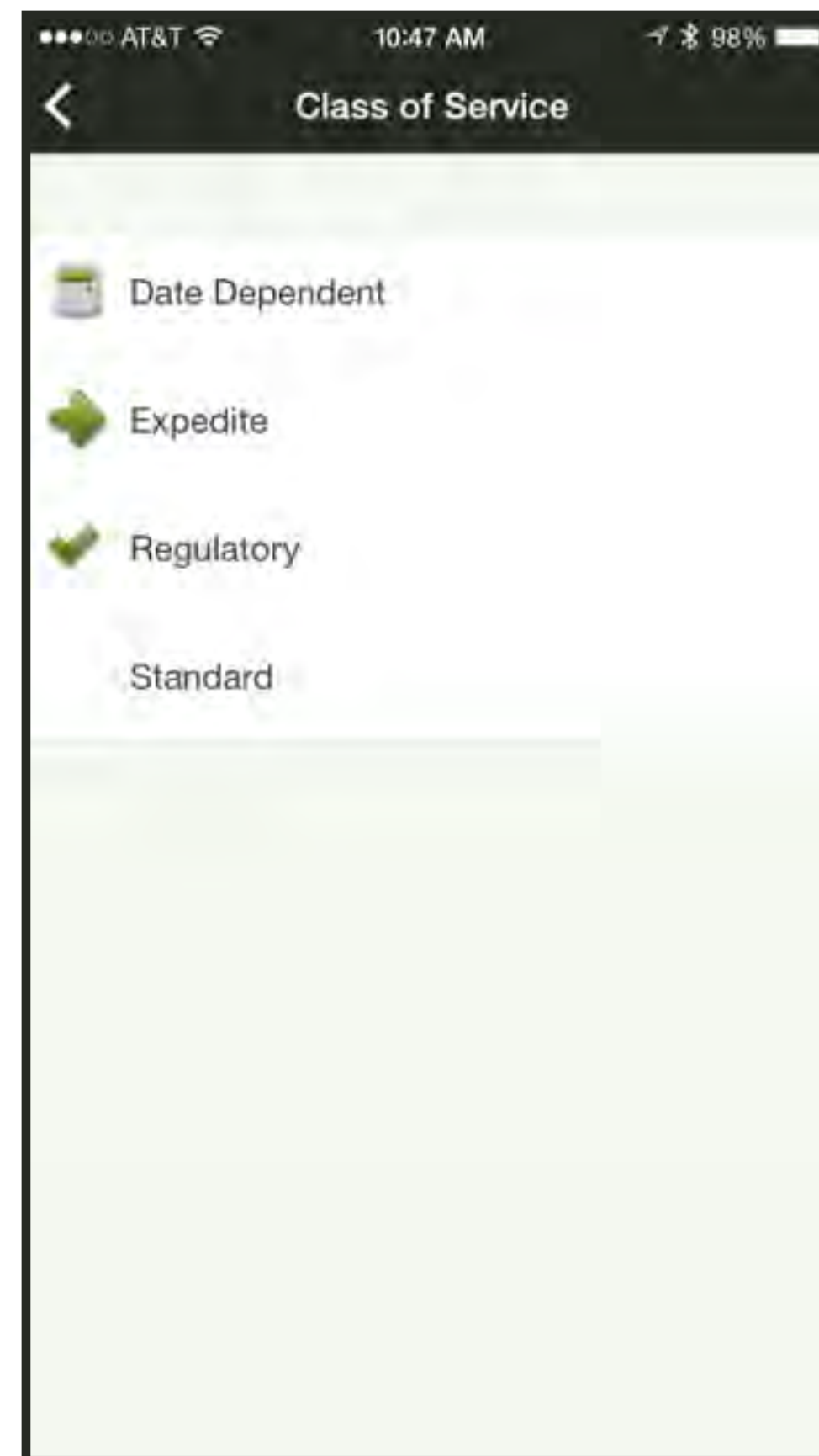
The screenshot shows a web application window titled "leankit CLASS OF SERVICE". The interface includes a sidebar on the left with a "NOT STARTED - FUTURE WORK" section. The main content area is a form for creating or editing a card. The form has several sections:

- Details:** Includes a "Assigned Users" section.
- TITLE:** A text input field.
- DESCRIPTION:** A rich text editor with formatting options (Bold, Italic, Underline, Font Size, Bulleted List, Numbered List, Indent, Outdent, Link, Unlink, Image, Video, Embed, Code, Table, Table of Contents, Undo, Redo).
- CARD TYPE:** A dropdown menu currently set to "New Feature".
- SIZE:** A text input field.
- TAGS:** A text input field.
- PLANNED START:** A date picker.
- PLANNED FINISH:** A date picker.
- CARD ID:** A text input field.
- PRIORITY:** A dropdown menu set to "Normal" and an "UNBLOCKED" button.
- CLASS OF SERVICE:** A dropdown menu with a list of options: "Select Class of Service" (selected), "Date Dependent", "Expedite", "Regulatory", and "Standard".
- PARENT CARD:** A dropdown menu set to "No Association".
- ADD EXTERNAL LINK:** A text input field with a placeholder "http://www.leankit.com".

At the bottom of the form are three buttons: "Save Card", "Save & Add More", and "Cancel".

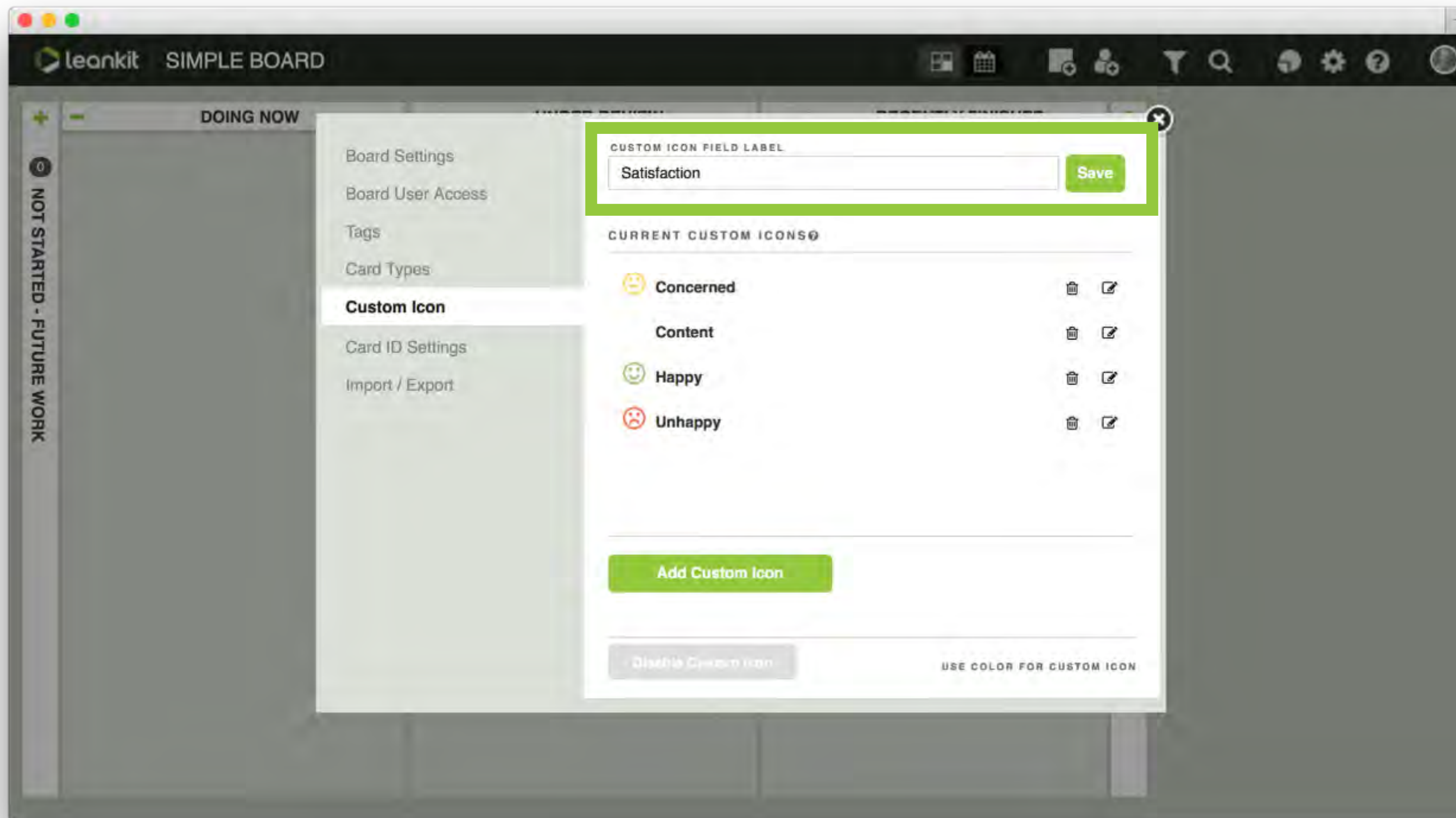
Example: Custom Icons

Use that to relabel UI in mobile ... SHIP IT



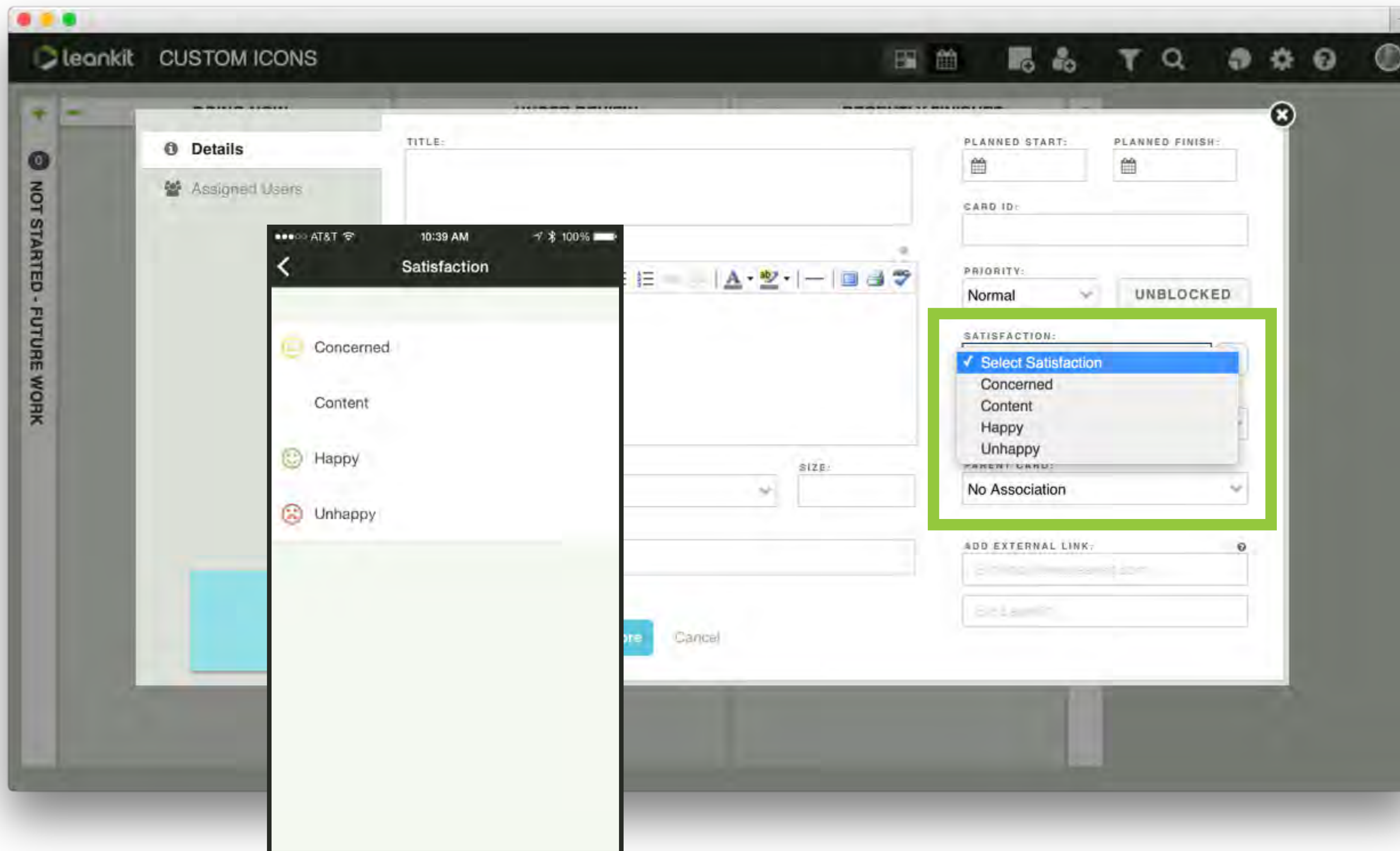
Example: Custom Icons

Add edit field to browser board edit UI ... SHIP IT!



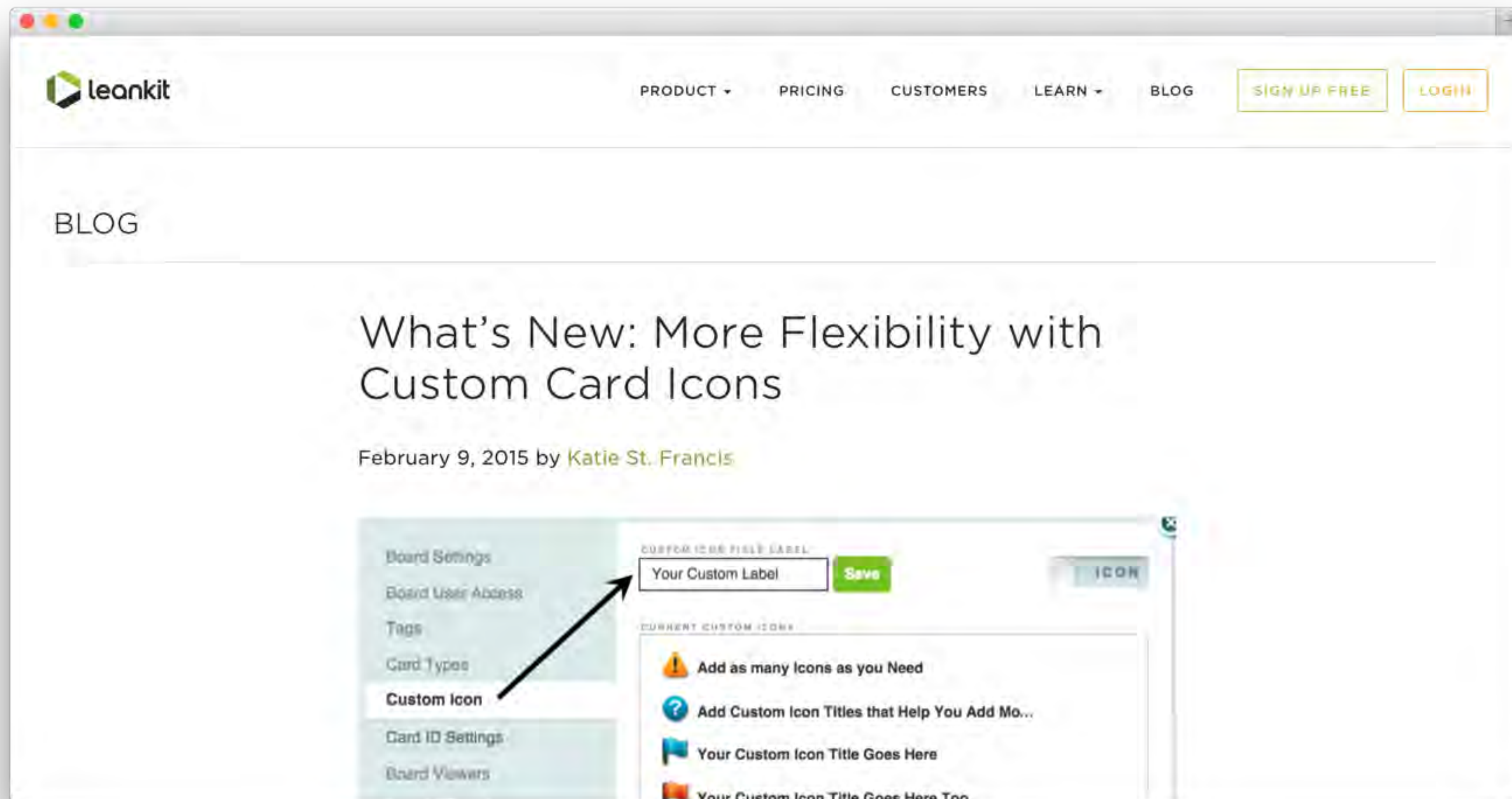
Example: Custom Icons

All the pieces are in place. It just works.



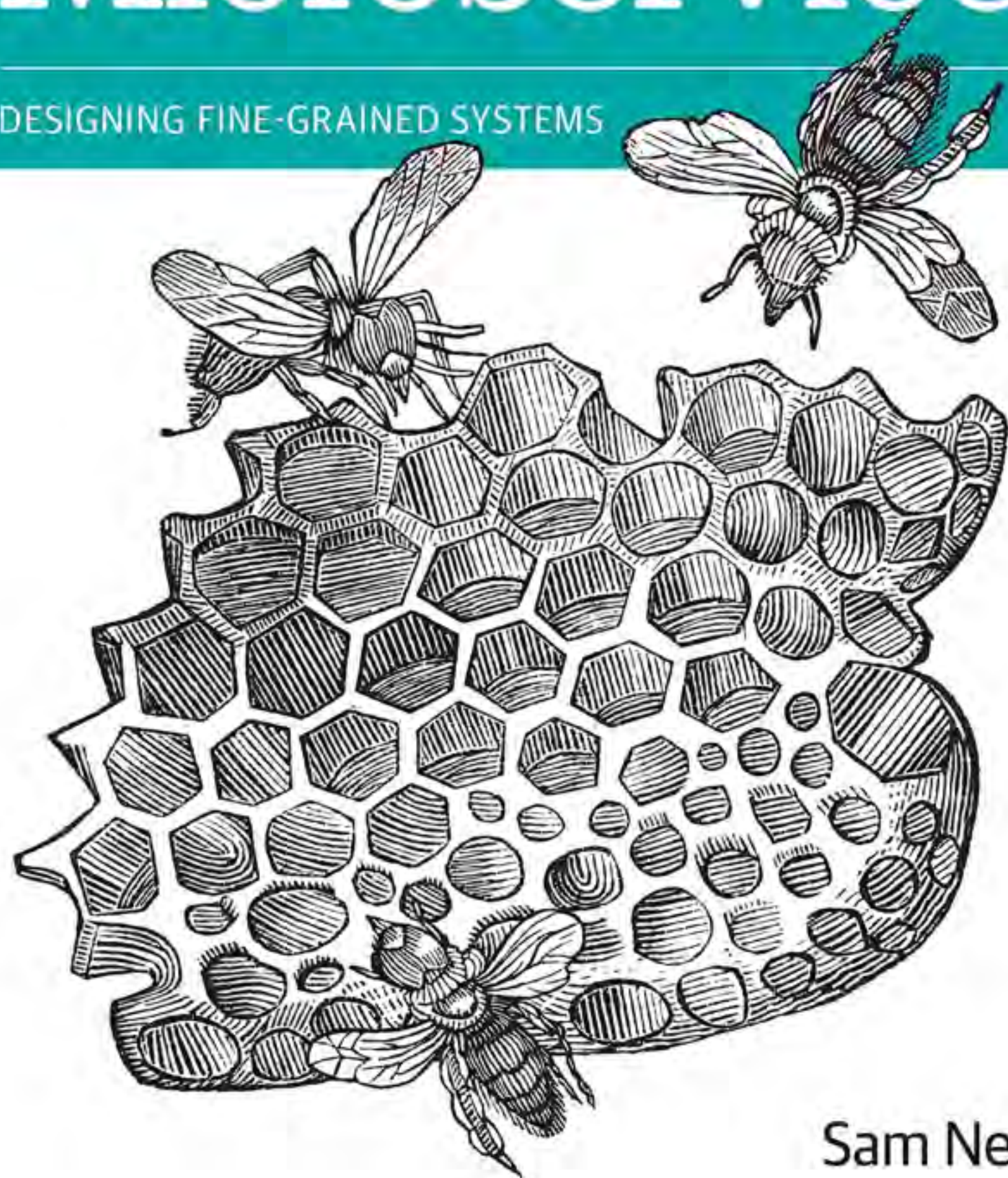
Example: Custom Icons

ANNOUNCE IT (prewritten ... whenever)



Building Microservices

DESIGNING FINE-GRAINED SYSTEMS



Sam Newman

"These services need to be able to change independently of each other, and be deployed by themselves without requiring consumers to change. ... Without decoupling, everything breaks down for us."

Frequent

Small

Good

Decoupled

Coordinated

Damaging

**Frequent
Small
Garbage
Decoupled**



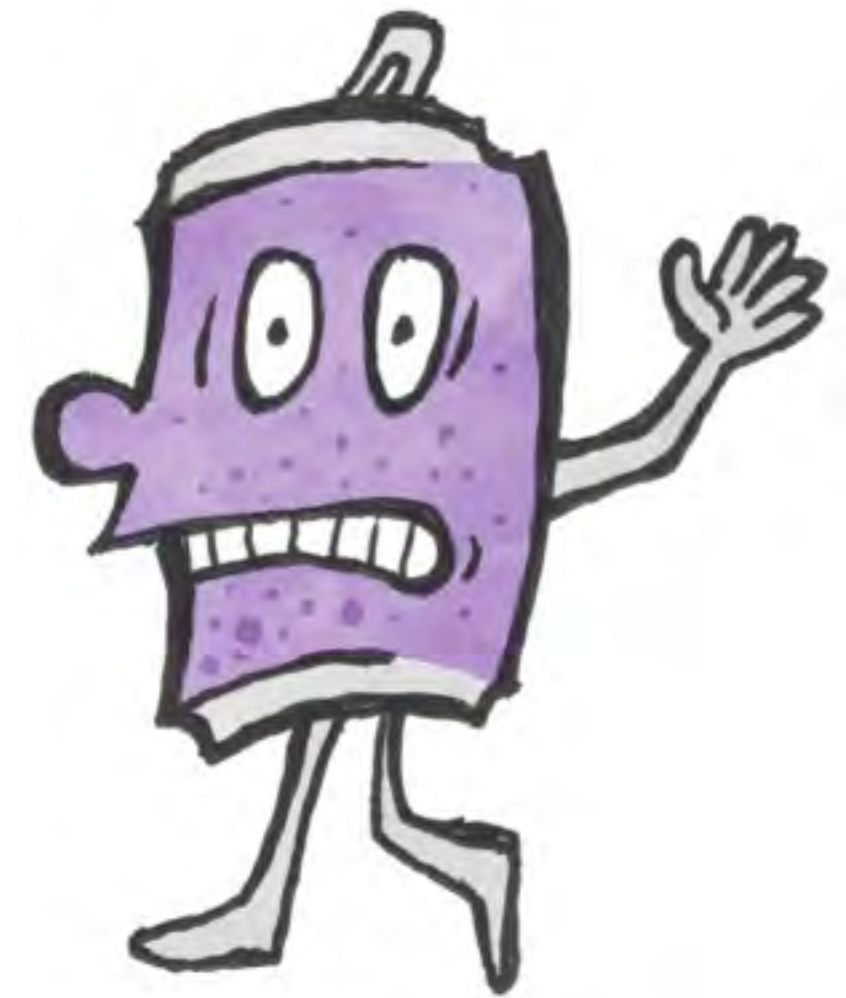
Frequent
Small
Garbage
Decoupled



Frequent
Small
Good
Damaging



~~Frequent~~
~~Small~~
~~Good~~
~~Decoupled~~



PRIMUM NON NOCERE

PRIMUM NON NOCERE

First, do no harm

Frequent

Small

Good

Decoupled

(i.e. non damaging, do no harm)

bioethics

beneficence

non-maleficence

**Frequent
Small
Good
Decoupled**



**Frequent
Small
Good
Decoupled**



**Frequent
Small
Good
Decoupled**



**Frequent
Small
Good
Decoupled**



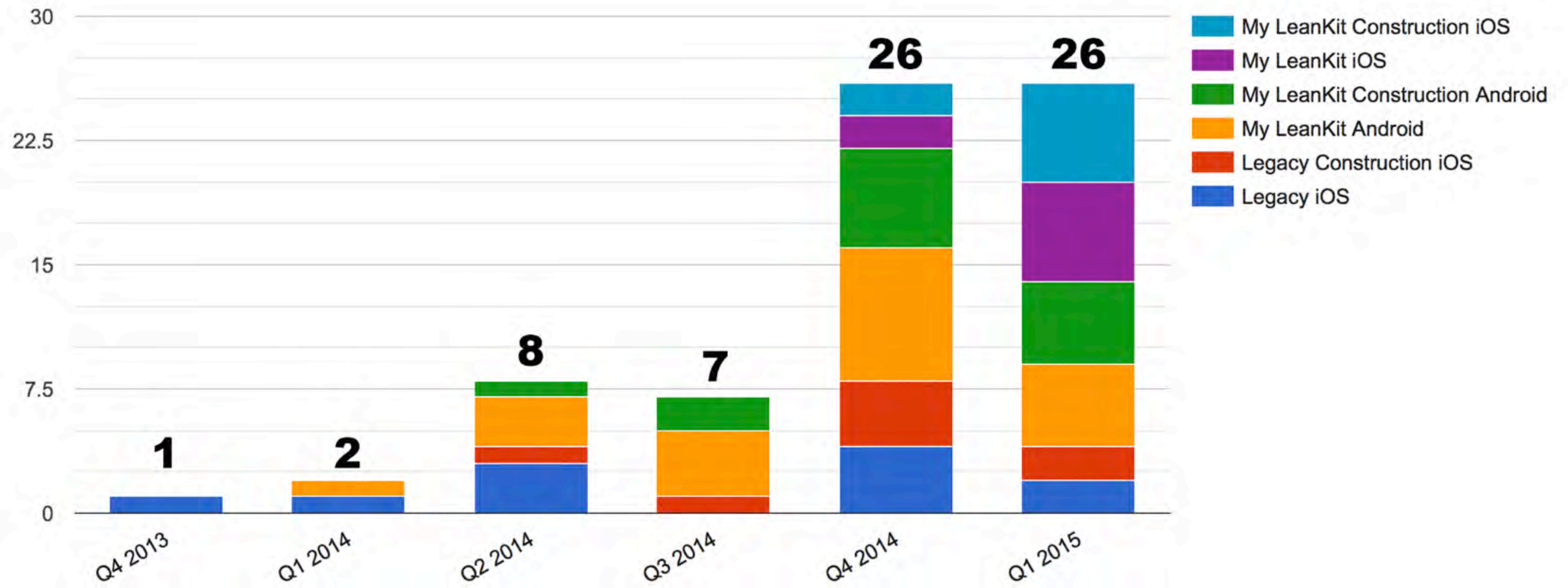
**Frequent
Small
Good
Decoupled**



Results

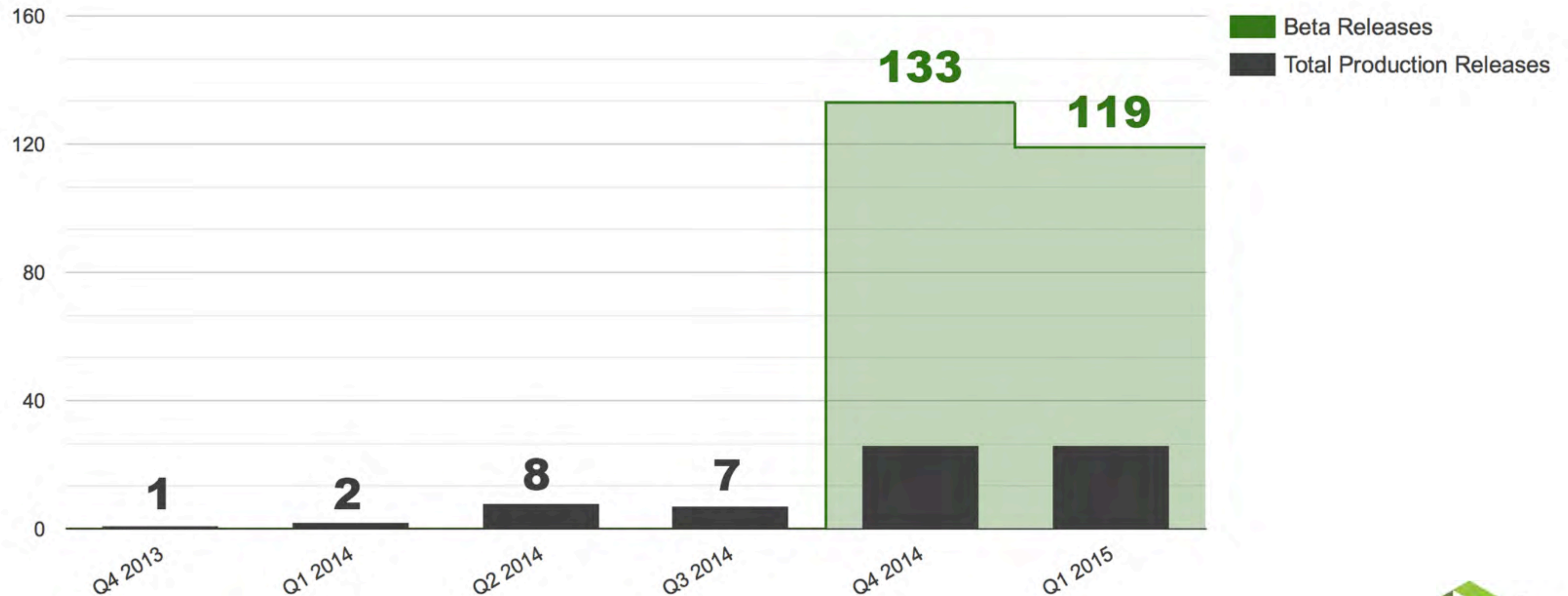


LeanKit Mobile Team Releases



LeanKit Mobile Team Releases

Beta



LeanKit Mobile Team Releases



MyLeanKit

iOS

● 4.12.0 Ready for Sale

● 5.3.0 Waiting For Review

Frequent
Small
Good
Decoupled

@daniel_norton
github.com/danielnorton
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2014 by LEANKIT – Daniel Norton, Jon Terry and Chris Hefley

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