Valkyrizing the Duke Digital Repository

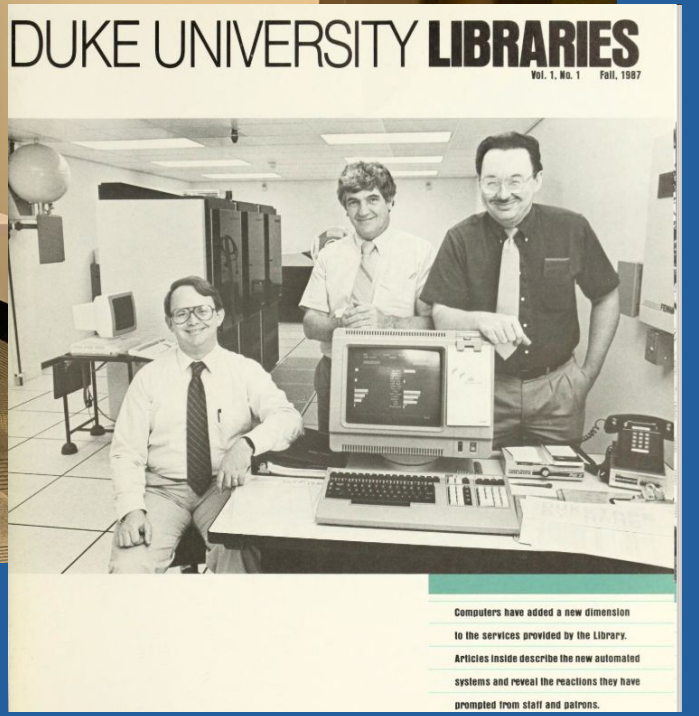
Samvera Virtual Connect
May 14, 2020

Will Sexton
Head, Software Services
Duke University Libraries

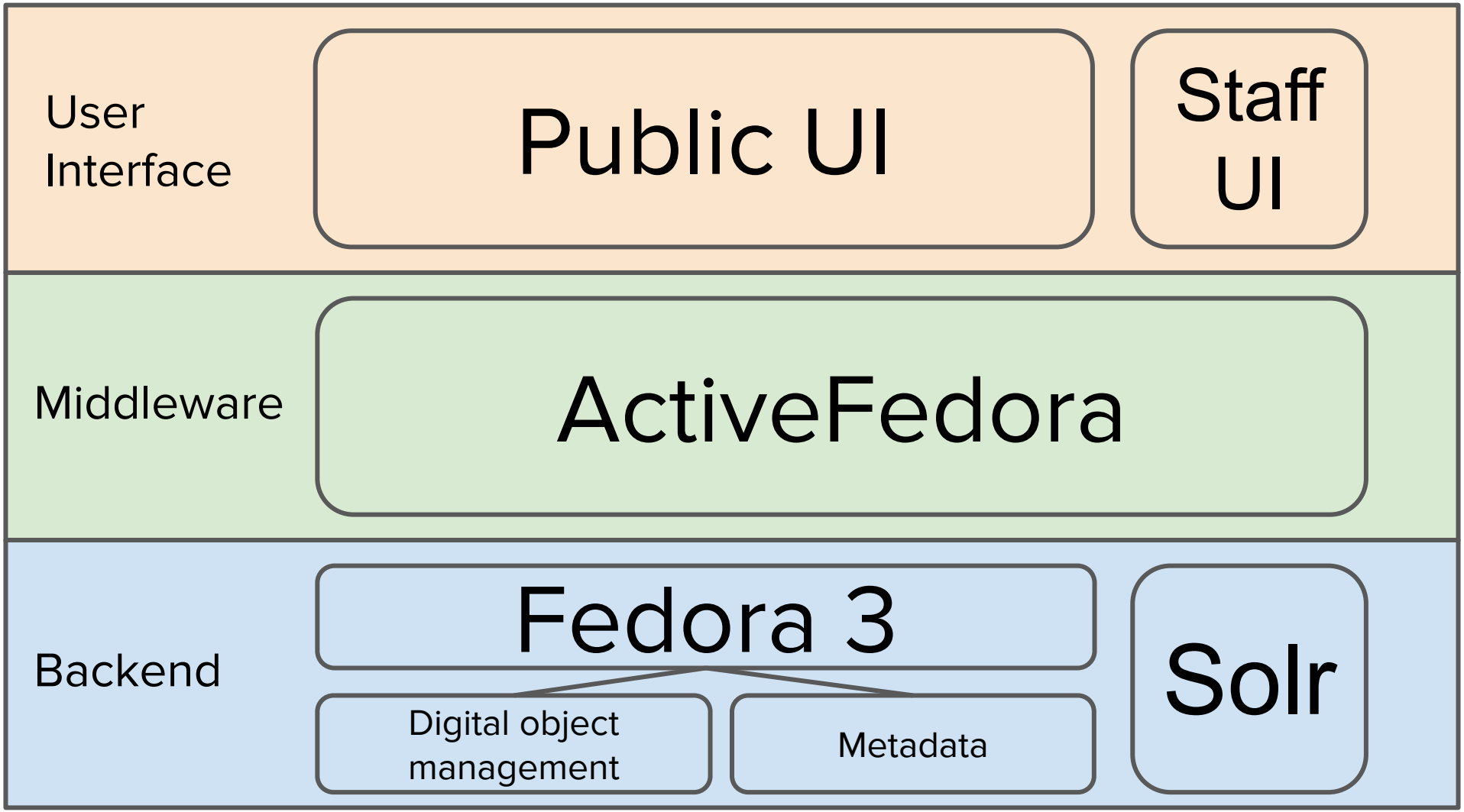
will.sexton@duke.edu

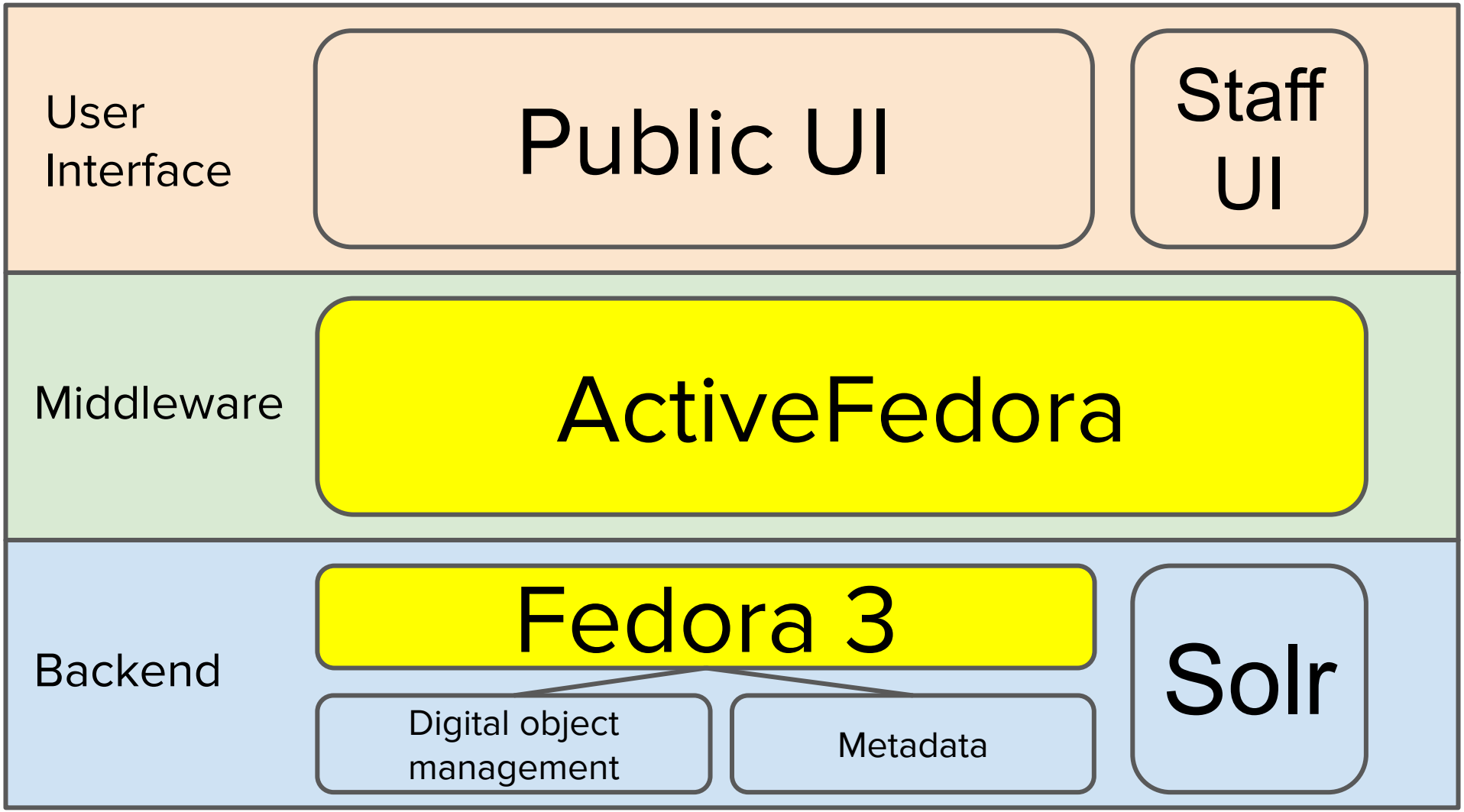
Here Are Some Bullet Points About The Project

- Named “DDR Evolution” or DDREvo
- Concluded with release of DDR 2.0.0 replacing DDR 1.X (DDR-C)
- No new functionality was developed for the repository
- Kicked off in November 2018, shortly after completing our Hyrax-based Duke Research Data Repository
- Sprint 0 ended in January 2019, followed by 16 two-week sprints by a four-person team (Hugh Cayless, David Chandek-Stark, Jim Coble, Ayse Durmaz)
- Final steps completed outside of sprint cycles, and a fifth developer (Cory Lown) joining the team
- Also separately did a new DDR home page


DUKE UNIVERSITY LIBRARIES
Vol. 1, No. 1 Fall, 1987
Computers have added a new dimension
to the services provided by the Library.
Articles inside describe the new automated
systems and reveal the reactions they have
prompted from staff and patrons.

The next five slides were used for a lightning talk explaining why we were using all of one developer's time for more than a year, as well as parts of four others'.

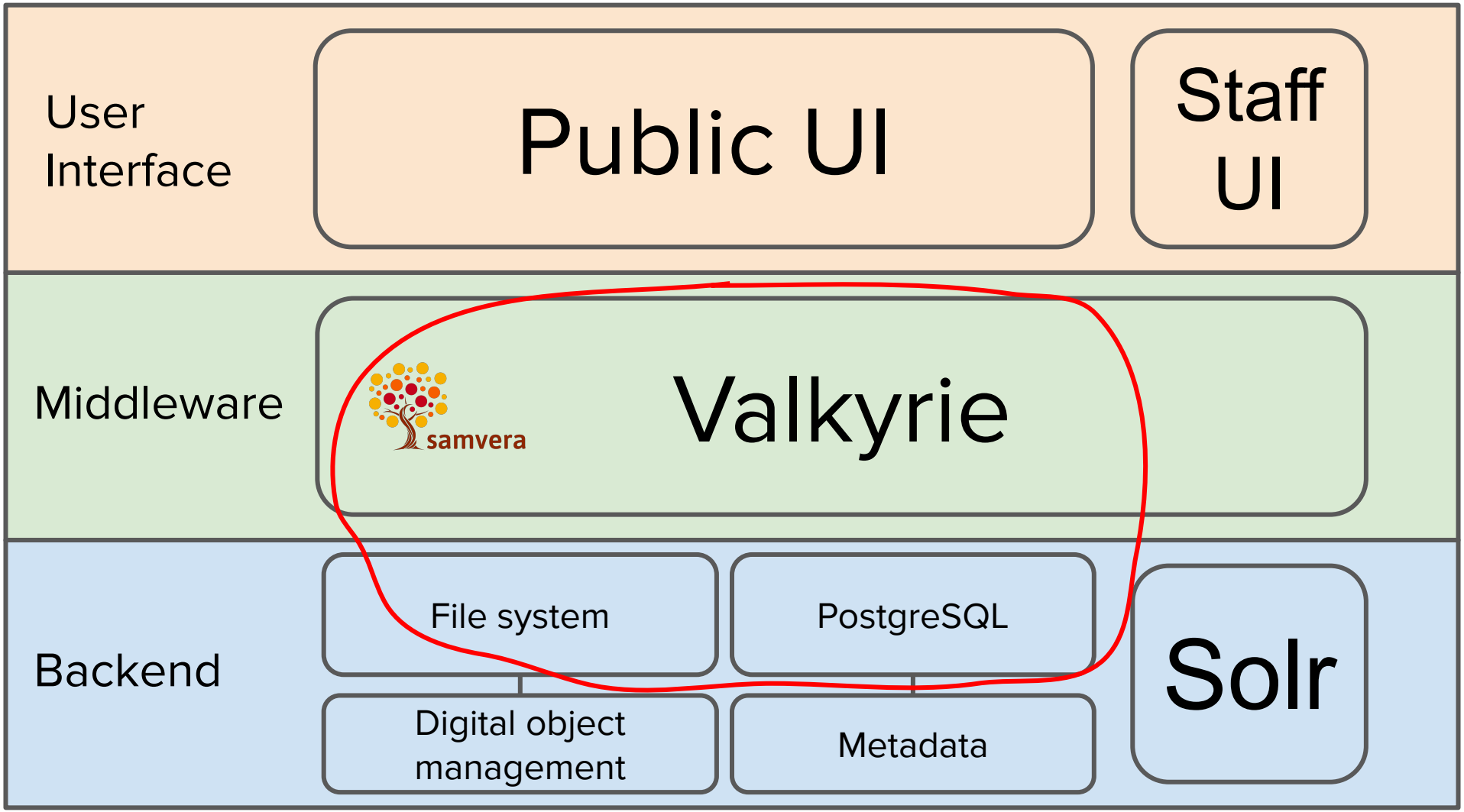

User Interface
Public UI
Staff UI
Middleware
ActiveFedora
Backend
Fedora 3
Digital object management
Metadata
Solr


User Interface
Public UI
Staff UI
Middleware
ActiveFedora
Backend
Fedora 3
Digital object management
Metadata
Solr

- Fedora 3 nearing end of life
  - Last release December 2014
  - DUL tried to migrate away (to F4) in 2016

- Version of ActiveFedora that works with Fedora 3 no longer supported

Samvera logo by Samvera (CC BY 4.0)


User Interface
Public UI
Staff UI
Middleware
samvera
Valkyrie
Backend
File system
PostgreSQL
Digital object management
Metadata
Solr

Valkyrie

- Software “for enabling multiple backends for storage of files and metadata in Samvera”
- Released from Samvera Labs as full Samvera community project March 11, 2019
- Currently in use (production) at Princeton, Penn State, UCSD, UCSB, Northeastern, and soon Emory
- Planned middleware component for Hyrax (basis of DUL’s Research Data Repository)

Valkyrie logo: https://github.com/samvera/valkyrie

But …

Valkyrie

… Why?

We considered three alternatives:

A. Upgrade Existing Code to Latest Fedora/ActiveFedora Version

B. Reimplement Existing Functionality in Hyrax-Based Application

C. Replace ActiveFedora with Valkyrie

Quoting from Jim's analysis (Jan. '19):

"While Fedora 3 has proven to be a relatively stable, reliable platform for the DDR, subsequent versions of Fedora (4 and now 5) are completely different products…."

"…I imagine it is nearly as much work as the Valkyrie option…"

"There are a number of factors that I think make Fedora 4/5 a less attractive platform than Fedora 3 (e.g., in Fedora 4, data is stored in a largely opaque manner and I don't think this has changed in Fedora 5)."

But …

Valkyrie

… Why?

We considered three alternatives:

A. Upgrade Existing Code to Latest Fedora/ActiveFedora Version

B. Reimplement Existing Functionality in Hyrax-Based Application

C. Replace ActiveFedora with Valkyrie

Quoting from Jim's analysis (Jan. '19):

"The Hyrax option (B) is the one that would move us most squarely back into mainstream Samvera community code but is, I believe, a significantly bigger project than the Valkyrie option (C)"

"To be successful, I think it would require active participation of DDR stakeholders to negotiate where native Hyrax functionality can replace that of the current DDR, even if it is different, and where Hyrax functionality would have to be customized to meet stakeholder needs."

But …

Valkyrie

… Why?

We considered three alternatives:

A. Upgrade Existing Code to Latest Fedora/ActiveFedora Version

B. Reimplement Existing Functionality in Hyrax-Based Application

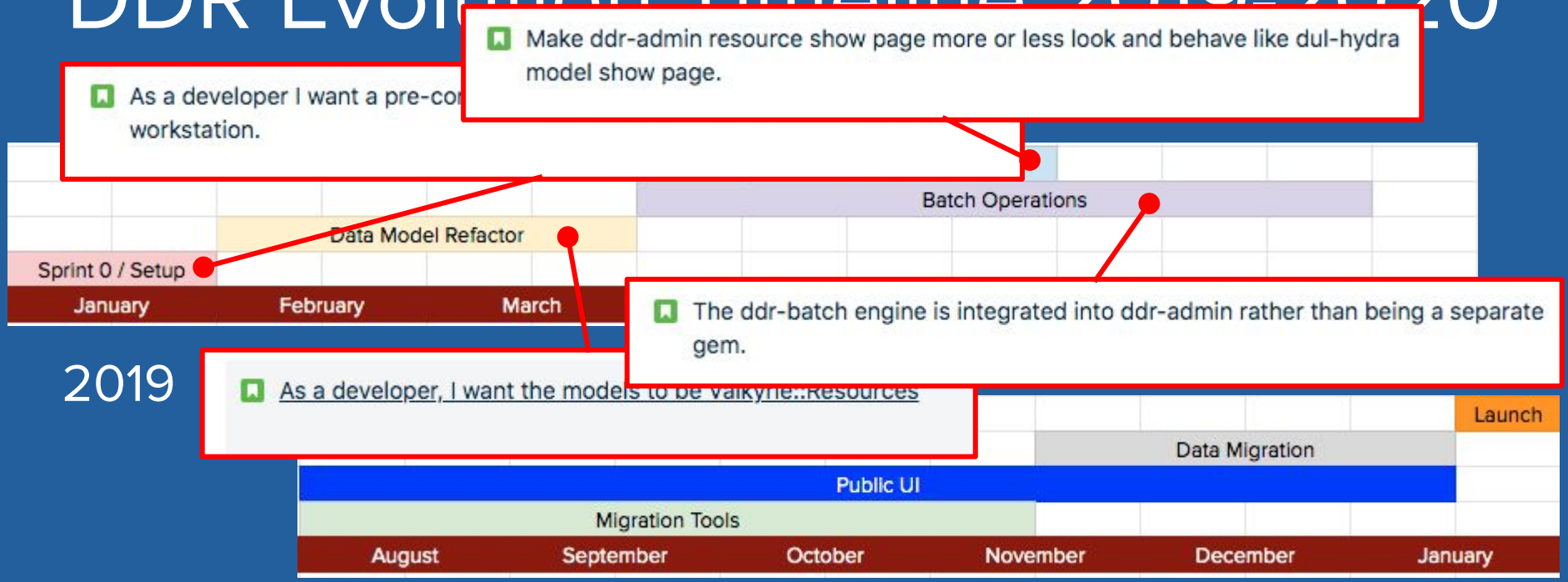
C. Replace ActiveFedora with Valkyrie

Quoting from Jim's analysis (Jan. 19):

"The Valkyrie option (C) is the one that I believe would provide the simplest, most direct path out of our dependence on unsupported software (Fedora 3, ActiveFedora 7)."

"There is perhaps some level of risk in the Valkyrie option since it is a new project and, as noted above, still a 'labs' project but there seems to be a good bit of community interest and energy in it and I would expect it to become officially supported soon"

DDR Evolution Timeline 2019-2020



Resource Migration

Created by Jim Coble (Unlicensed)
Last updated Nov 05, 2019 • Analytics

IMPORTANT: These steps are to be run FOR EACH LIST OF COLLECTIONS that is being migrated

Migrating a list of collections from DDR-C to DDRevo involves the following steps:

1. Become user `hydra` on the DDR-C server and change into the `dul_hydra` project directory.

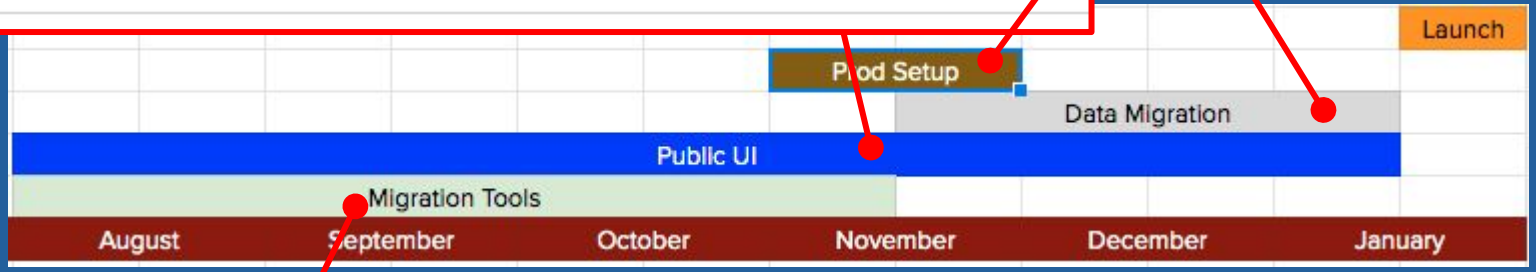
```
$ sudo -u hydra -i
$ cd /srv/perkins/hydra/dul-hydra
```

19-2020

DDRevo DevOps production punch list

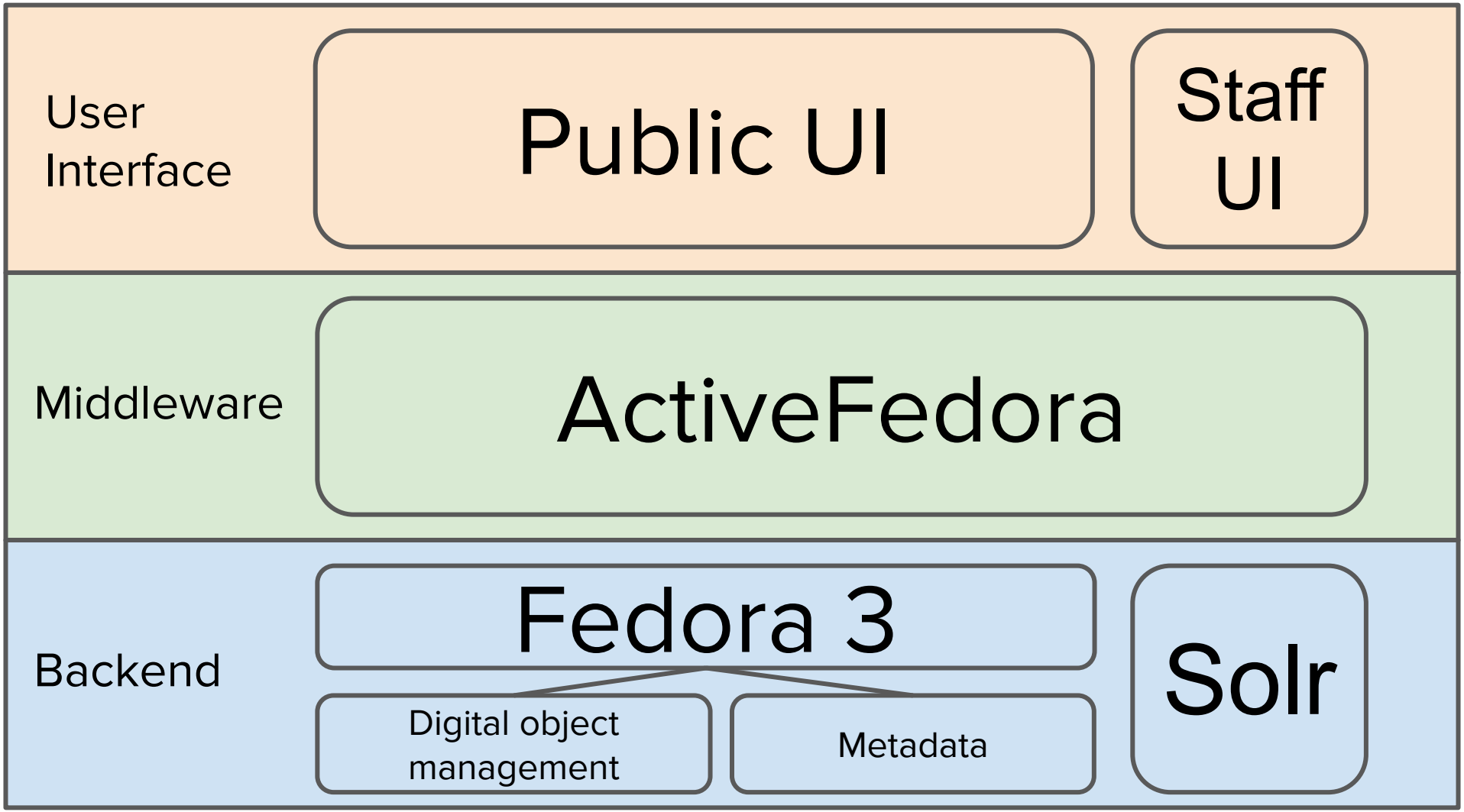
eneration from

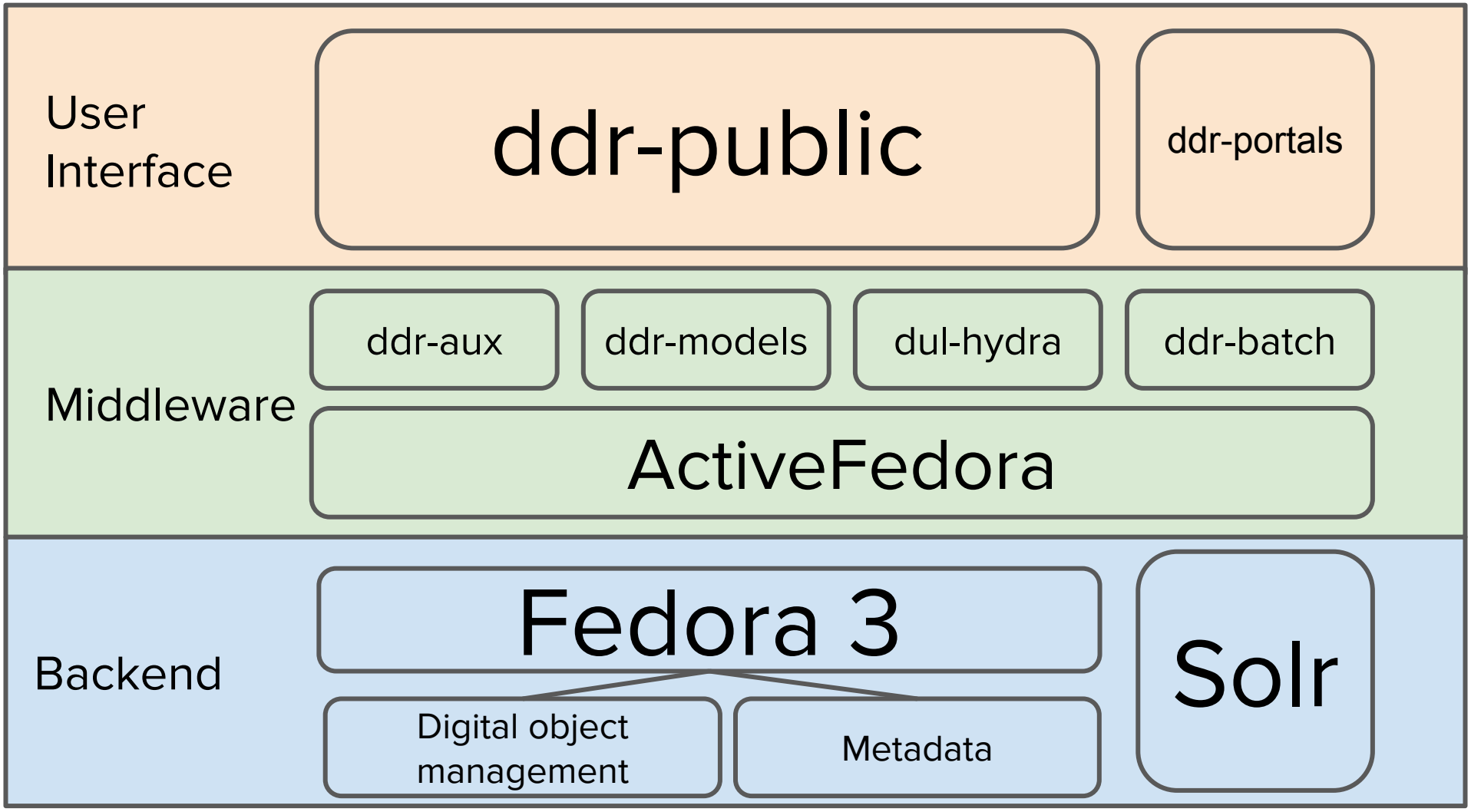
July

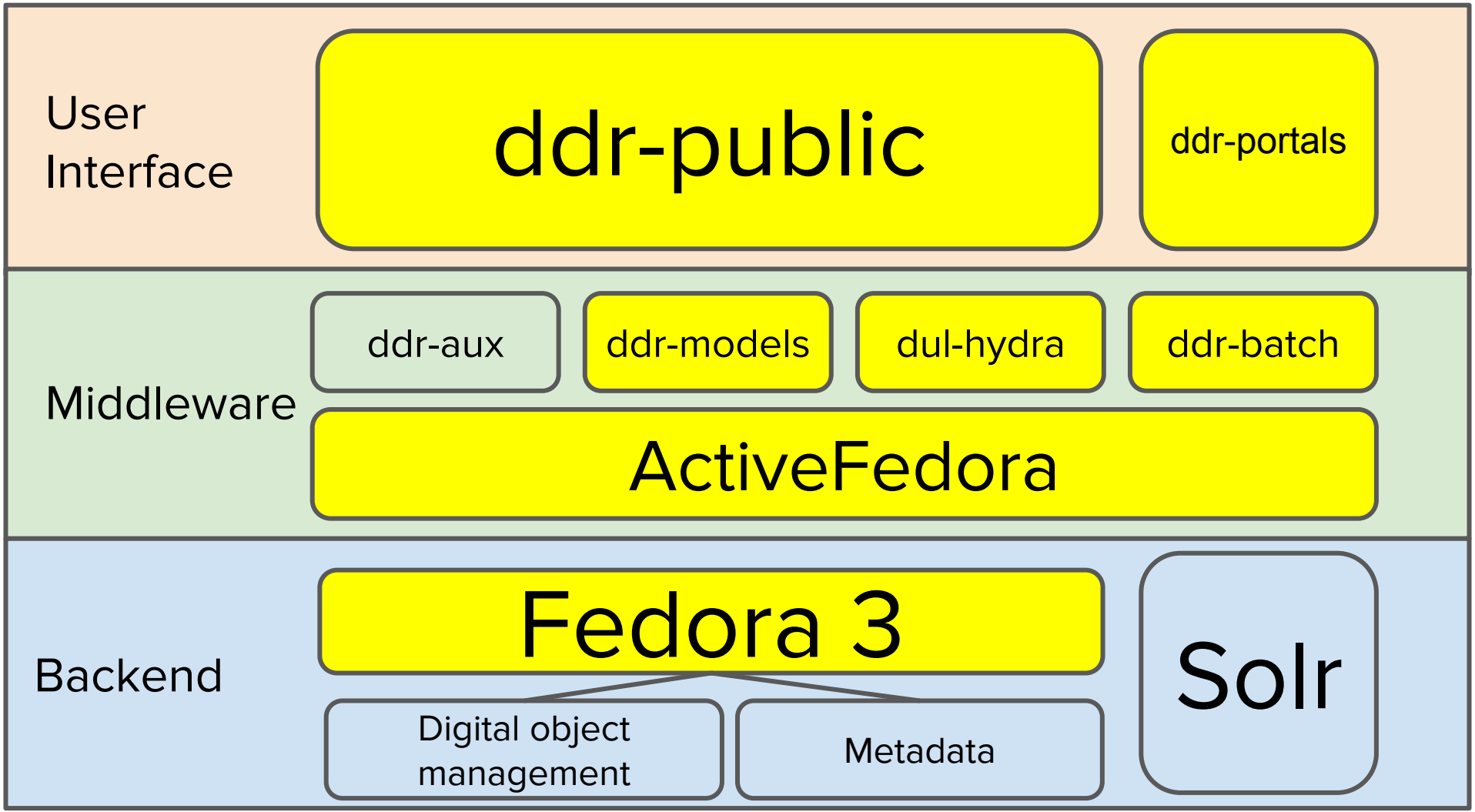


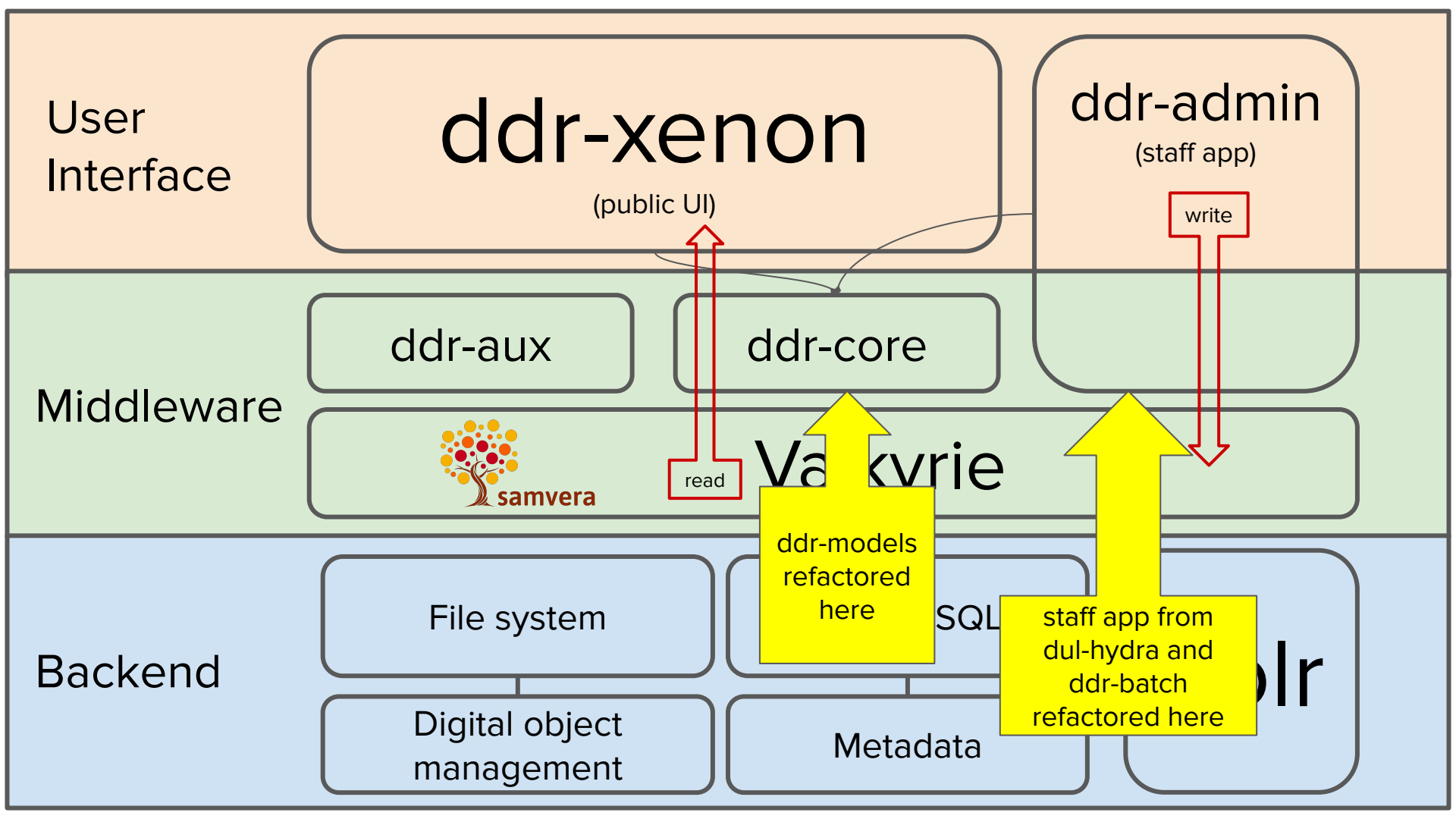
2020

As a migrator, I can create DDRevo resources based on the contents of a DDR-C metadata export.


User Interface
Public UI
Staff UI
Middleware
ActiveFedora
Backend
Fedora 3
Digital object management
Metadata
Solr


User Interface
ddr-public
ddr-portals
Middleware
ddr-aux
ddr-models
dul-hydra
ddr-batch
ActiveFedora
Backend
Fedora 3
Digital object management
Metadata
Solr

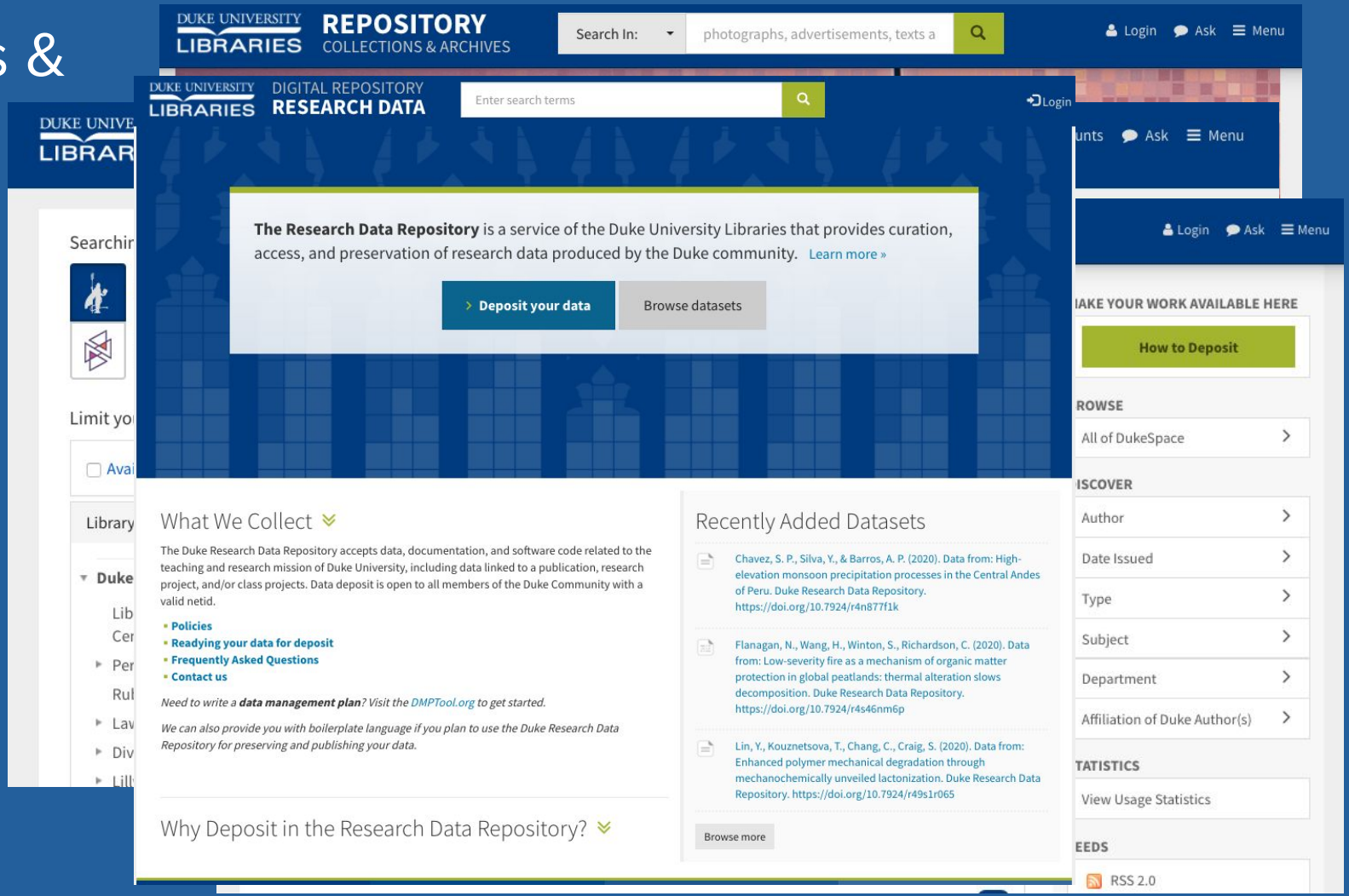

User Interface
ddr-public
ddr-portals
Middleware
ddr-aux
ddr-models
dul-hydra
ddr-batch
ActiveFedora
Backend
Fedora 3
Digital object management
Metadata
Solr


User Interface
ddr-xenon
(public UI)
ddr-admin
(staff app)
write
Middleware
ddr-aux
ddr-core
samvera
read
Valkyrie
ddr-models refactored here
staff app from dul-hydra and ddr-batch refactored here
Backend
File system
SQL
Digital object management
Metadata
lr

New repository home page at repository.duke.edu

Headers & Footers

a mini-project



Thank You!

Samvera logo by Samvera (CC BY 4.0)

Valkyrie logo: https://github.com/samvera/valkyrie

Questions?