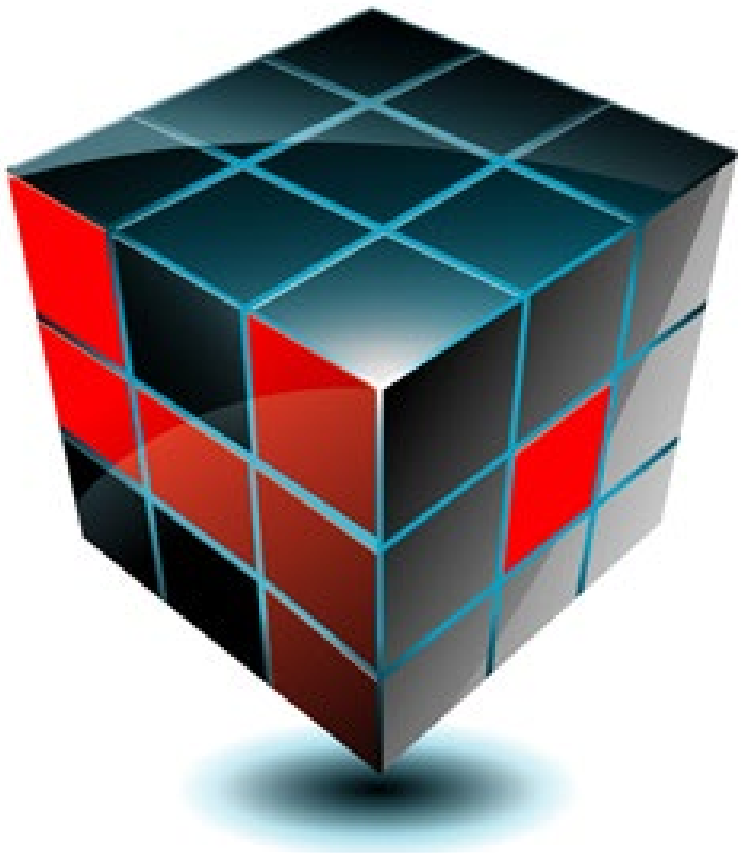


Hope is not a strategy…

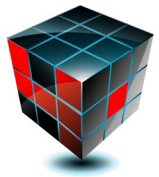
2021 NASA Cost & Schedule Symposium

A New Schedule Analytics Tool

April 14, 2021

Shanling Yang, Ph.D.

NASA HQ OCFO SID • 4-D Risk Corporation • Tecolote • FK&A



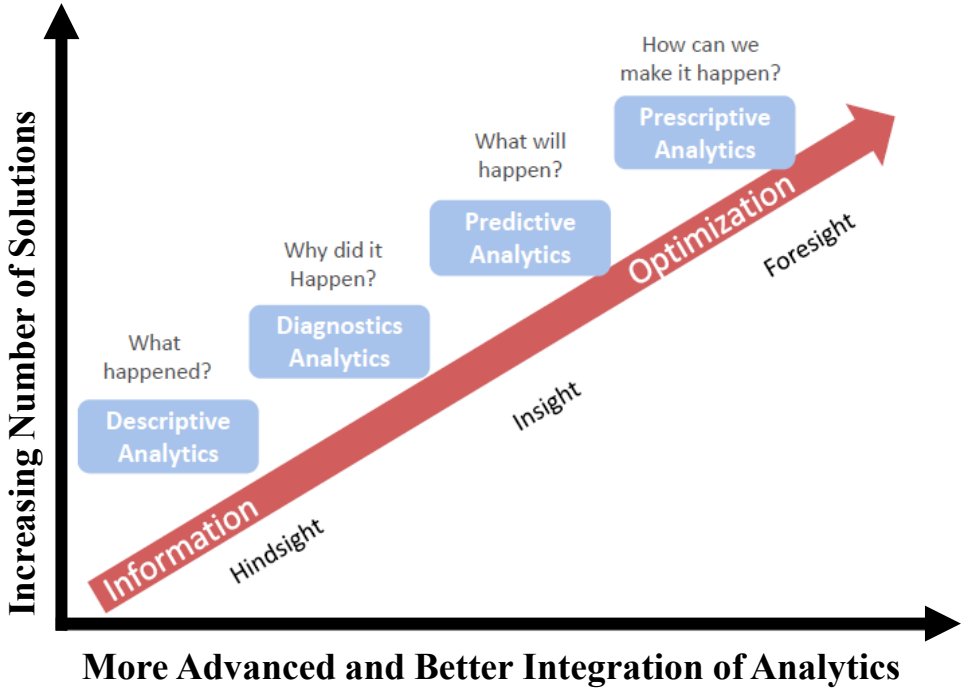
NASA's Desire For Improved Program and Project Management

- In recent years, several of NASA's highest profile missions experienced challenges in cost and schedule growth.
- NASA recently published a Corrective Action Plan (CAP) with initiatives to improve and mature NASA program and project management policies and processes, including planning, development, and analysis.

Identified Needs:

- **Schedule Database**
  - Collect NASA program and project schedules for completed and current missions and technology developments
  - Provide the schedule management community with access to historical and analogous schedules to aid in the planning and development of schedules for future missions
- **Schedule Data Analytics Reporting Tool**
  - Build upon existing schedule assessment tools for improved project management
  - Report important and relevant metrics
  - Simultaneously analyze and report on multiple schedules
  - Provide heuristics trends

Successful Program Management: Modernization of Analysis Environment



Successful Program Management: Modernization of Analysis Environment

Current Environment

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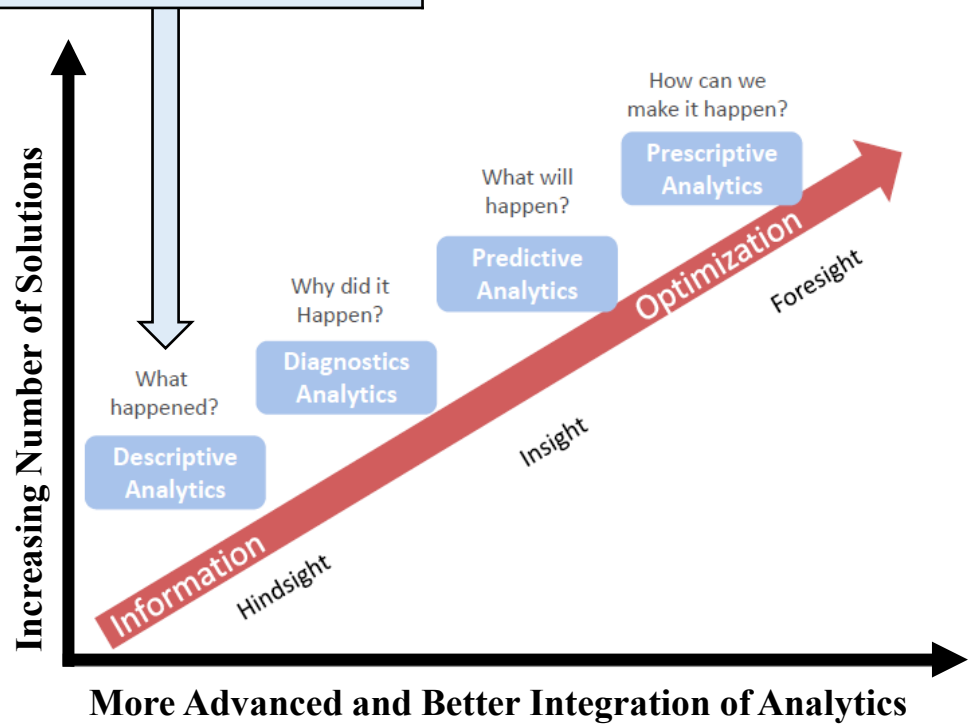
  - What was the cause?
- Slow Turnaround
- Unstructured Information
- Reactive



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Desired Environment

- **Prescriptive Analytics**
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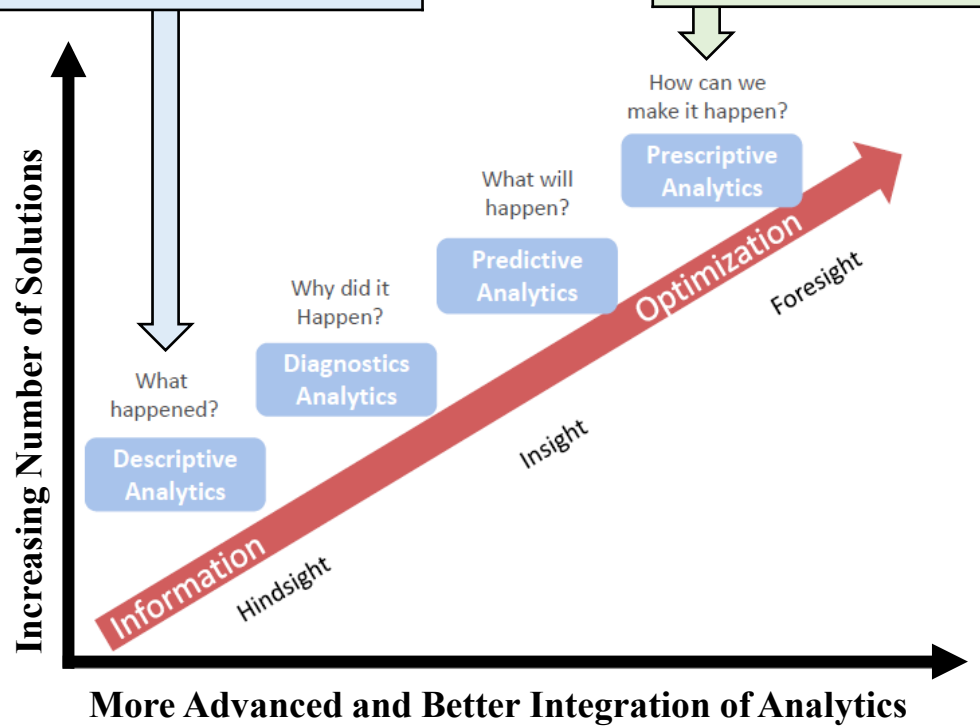
  - Where are pending issues?
  - Where is performance poor?
- Quicker Turnaround
- Focused Insight
- Proactive



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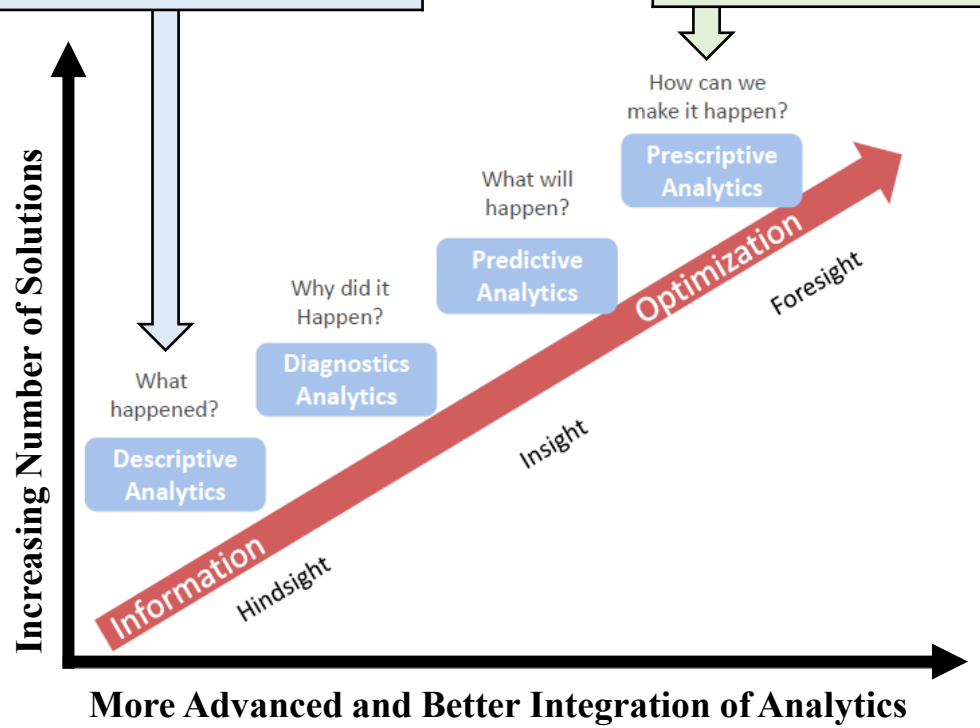

Achieving **Prescriptive Analytics** requires more advanced methods and better integration of analytics.

NASA Schedule Database Development Process

Objective: In 2019 NASA tasked 4-D Risk to implement a schedule database and cloud-based analytics tool.

Process:

Microsoft Cloud-Based Enterprise Environment Setup → Metric Identification and Benchmarking → Dashboards on TEAMS

Interface:
- TEAMS
- SharePoint

Visualization:
- Power BI

Database:
- Project Online
- SharePoint
- OneDrive
- FK&A Modeling Software

→ Data Extraction → Data Modeling → Data Visualization

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- OneDrive
- FK&A Modeling Software

Data Used For Initial Demonstration of Tool:
- 32 consolidated IMS files for 19 missions
- 10 missions with multiple time stamps

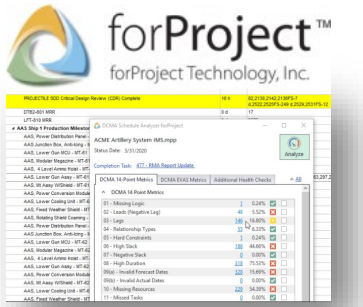
Data Extraction → Data Modeling → Data Visualization

Capability Goals:
- Streamlined file submission process for multiple submitters
- Rapid analysis of schedule metrics to assess and identify NASA best practices
- Robust ability to quickly add and modify reports

Metric Identification and Benchmarking

- Survey of existing schedule analytics tools revealed inconsistent and disparate metrics and benchmarks.
- Non-uniformity of existing tools is due to existing metrics being purpose-driven for each individual tool.
- Existing tools are all standalone tools lacking the capability to analyze across a portfolio of project files.
- Working with NASA HQ, a consolidated list of metrics was created, identifying important and relevant metrics and threshold values tailored for NASA.

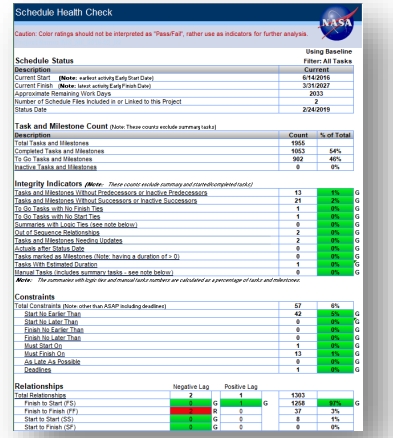
forProject™
forProject Technology, Inc.



Deltek Acumen FUSE

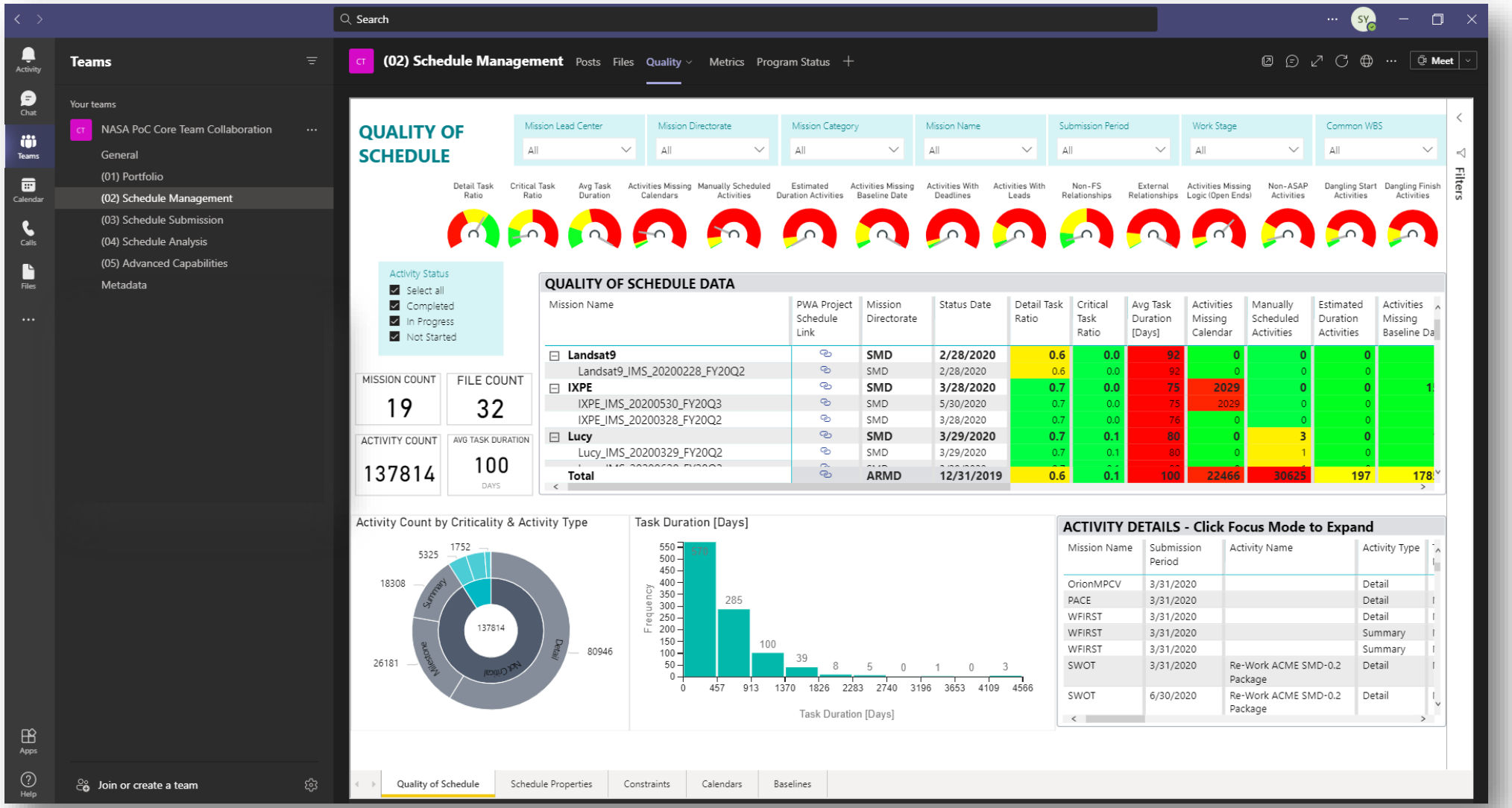
ACEIT
Automated Cost Estimating Integrated Tools

Schedule Test and Assessment Tool (STAT)



A consolidated list of metrics and benchmarks attempts to amend the disparities among current tools.

Easy Schedule Database Access Through TEAMS



Easy Schedule Database Access Through TEAMS

TEAMS allows for easy report integration with navigation through Channels, Tabs and Pages.

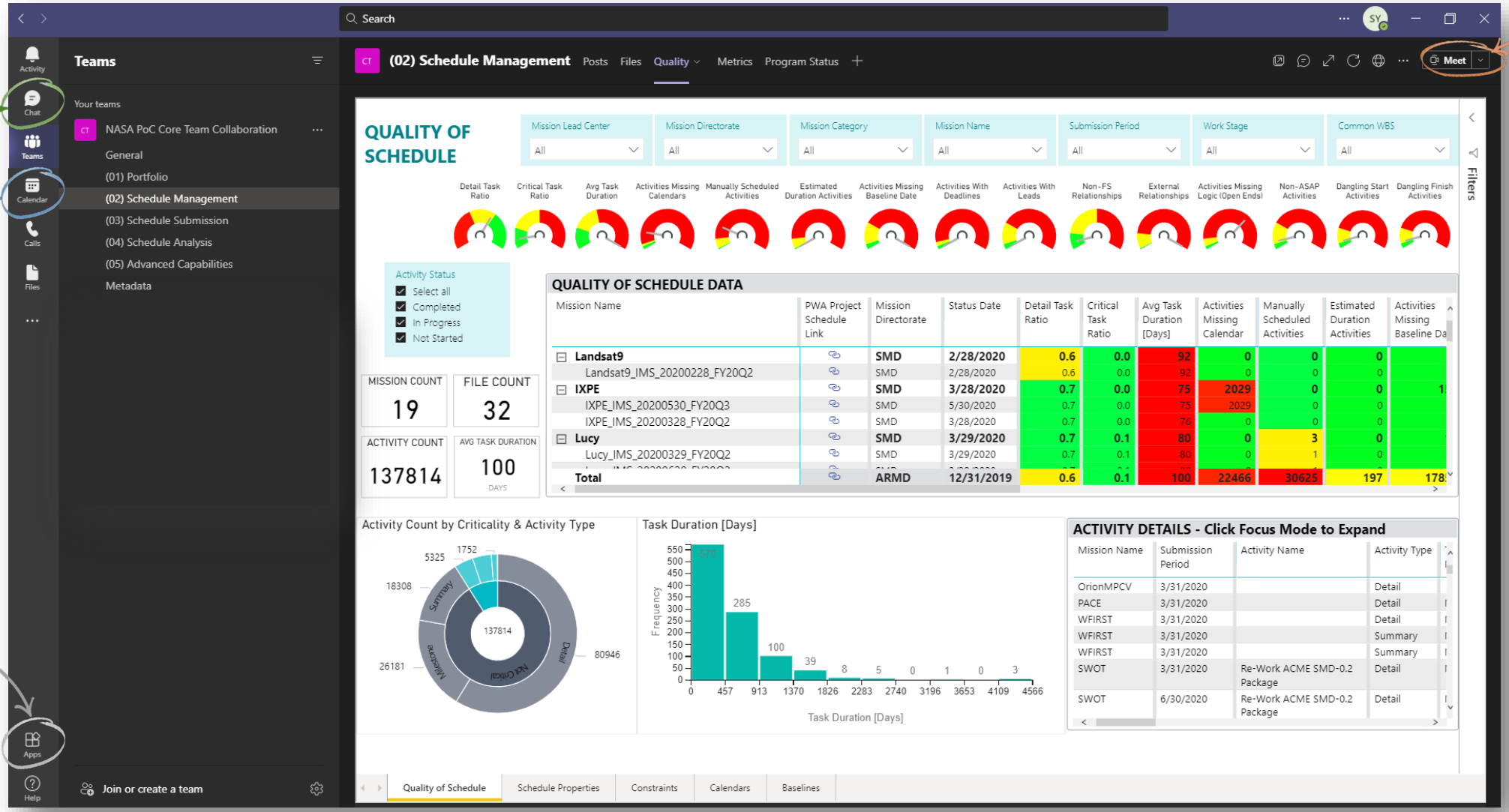
Full Access To All The Features of TEAMS

Chat

Calendars

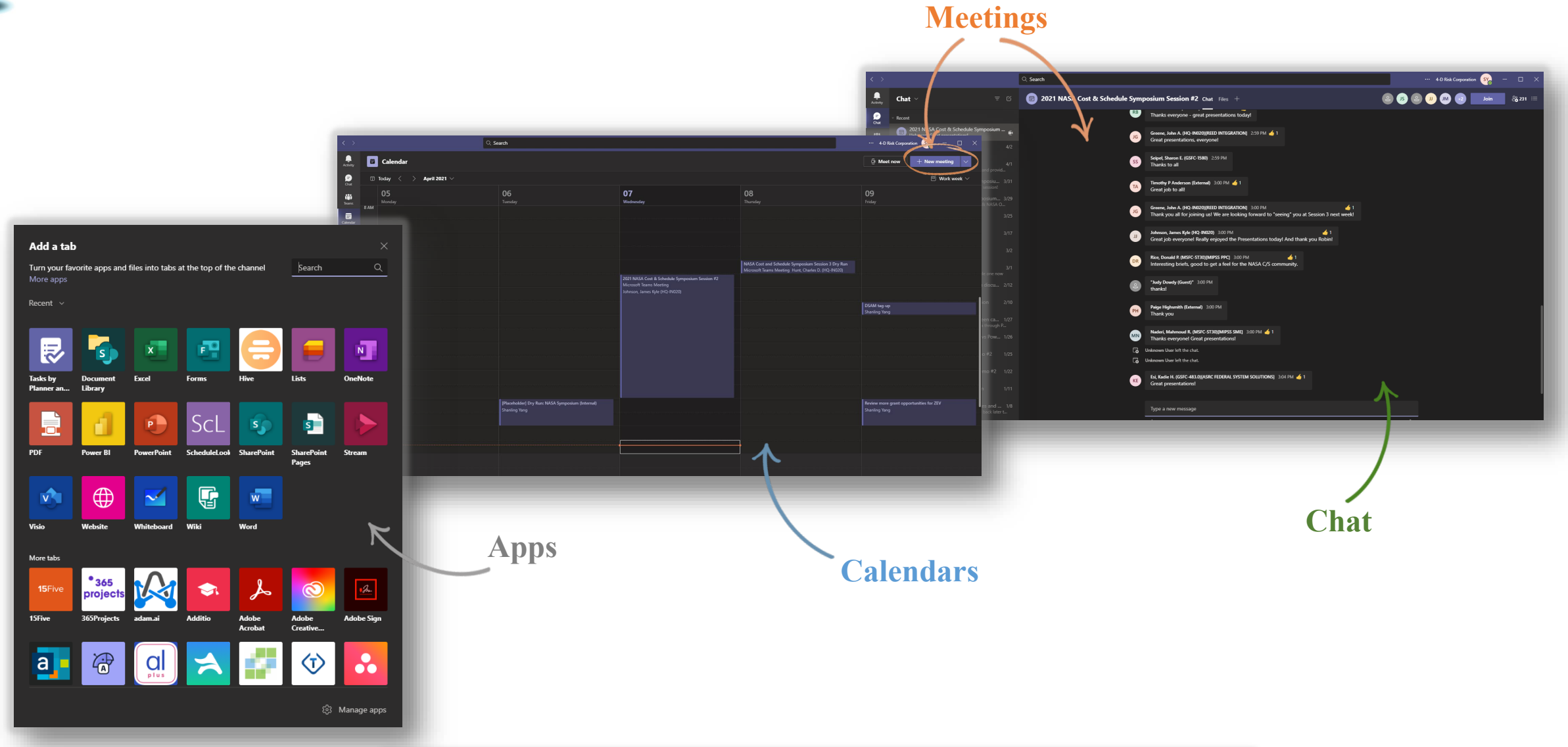
Apps

Meetings



Users can take advantage of all the benefits and features of TEAMS.

Full Access To All The Features of TEAMS



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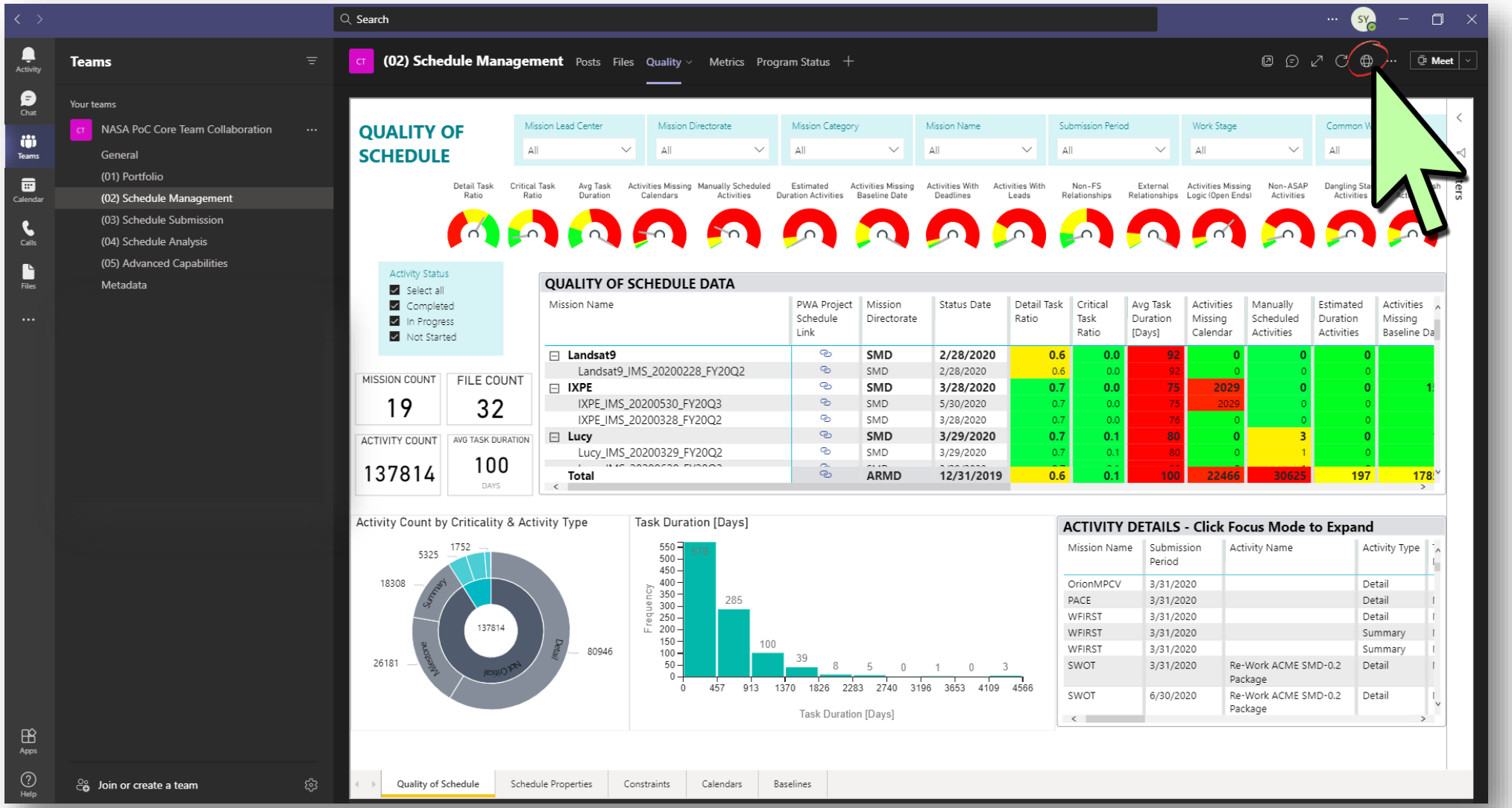
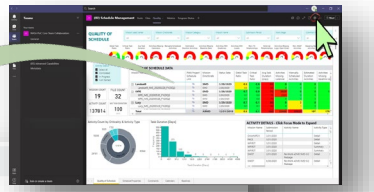
Reports Can Be Accessed Through Power BI Online



Any report can also be viewed from a web browser.

Reports Can Be Accessed Through Power BI Online



Apps

Power BI | BI Pack Development | NASAPowerBIPack-Premium-Workspace - (0... | Data updated 1/21/21 | Search

Pages
- Quality of Schedule
- Schedule Properties
- Constraints
- Calendars
- Baselines

File | Export | Share | Chat in Teams | Comment | Subscribe | Edit

QUALITY OF SCHEDULE

Mission Lead Center: All | Mission Directorate: All | Mission Category: All | Mission Name: All | Submission Period: All | Work Stage: All | Common WBS: All

Detail Task Ratio | Critical Task Ratio | Avg Task Duration | Activities Missing Calendars | Manually Scheduled Activities | Estimated Duration Activities | Activities Missing Baseline Date | Activities With Deadlines | Activities With Leads | Non-FS Relationships | External Relationships | Activities Missing Logic (Open Ends) | Non-ASAP Activities | Dangling Start Activities | Dangling Finish Activities

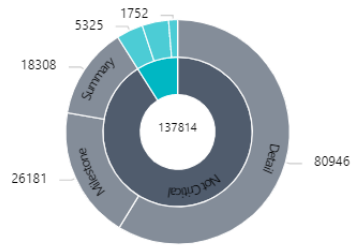
Activity Status
- Select all
- Completed
- In Progress
- Not Started

MISSION COUNT 19 | FILE COUNT 32 | ACTIVITY COUNT 137814 | AVG TASK DURATION 100 DAYS

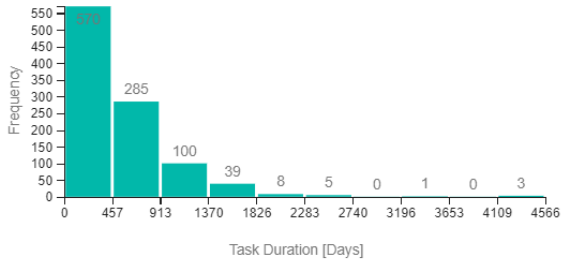
QUALITY OF SCHEDULE DATA

Mission Name	PWA Project Schedule Link	Mission Directorate	Status Date	Detail Task Ratio	Critical Task Ratio	Avg Task Duration [Days]	Activities Missing Calendar	Manually Scheduled Activities	Estimated Duration Activities	Activities Missing Baseline Da
Landsat9		**SMD**	**2/28/2020**	**0.6**	**0.0**	**92**	**0**	**0**	**0**	
Landsat9_IMS_20200228_FY20Q2		SMD	2/28/2020	0.6	0.0	92	0	0	0	
IXPE		**SMD**	**3/28/2020**	**0.7**	**0.0**	**75**	**2029**	**0**	**0**	**1**
IXPE_IMS_20200530_FY20Q3		SMD	5/30/2020	0.7	0.0	75	2029	0	0	
IXPE_IMS_20200328_FY20Q2		SMD	3/28/2020	0.7	0.0	76	0	0	0	
Lucy		**SMD**	**3/29/2020**	**0.7**	**0.1**	**80**	**0**	**3**	**0**	
Lucy_IMS_20200329_FY20Q2		SMD	3/29/2020	0.7	0.1	80	0	1	0	
Total		**ARMD**	**12/31/2019**	**0.6**	**0.1**	**100**	**22466**	**30625**	**197**	**178**

Activity Count by Criticality & Activity Type



Task Duration [Days]



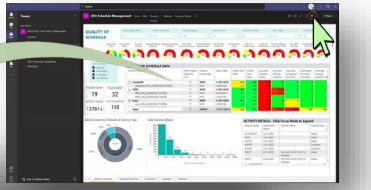
ACTIVITY DETAILS - Click Focus Mode to Expand

Mission Name	Submission Period	Activity Name	Activity Type
OrionMPCV	3/31/2020		Detail
PACE	3/31/2020		Detail
WFIRST	3/31/2020		Detail
WFIRST	3/31/2020		Summary
WFIRST	3/31/2020		Summary
SWOT	3/31/2020	Re-Work ACME SMD-0.2 Package	Detail
SWOT	6/30/2020	Re-Work ACME SMD-0.2 Package	Detail

Filters

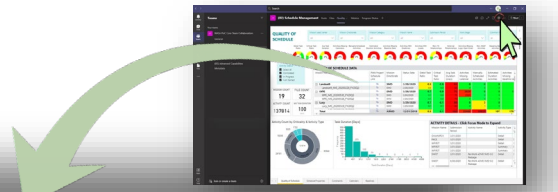
A new web browser window opens the report in Power BI Online.

Reports Can Be Edited In Power BI Online



Reports can be edited in Power BI Online in *Edit* mode.

Reports Can Be Edited In Power BI Online



All features found in Desktop Power BI become available in *Edit* mode.

Reports Can Be Edited In Power BI Online

Edited Reports Can Be Saved From Power BI Online

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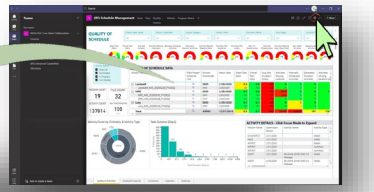

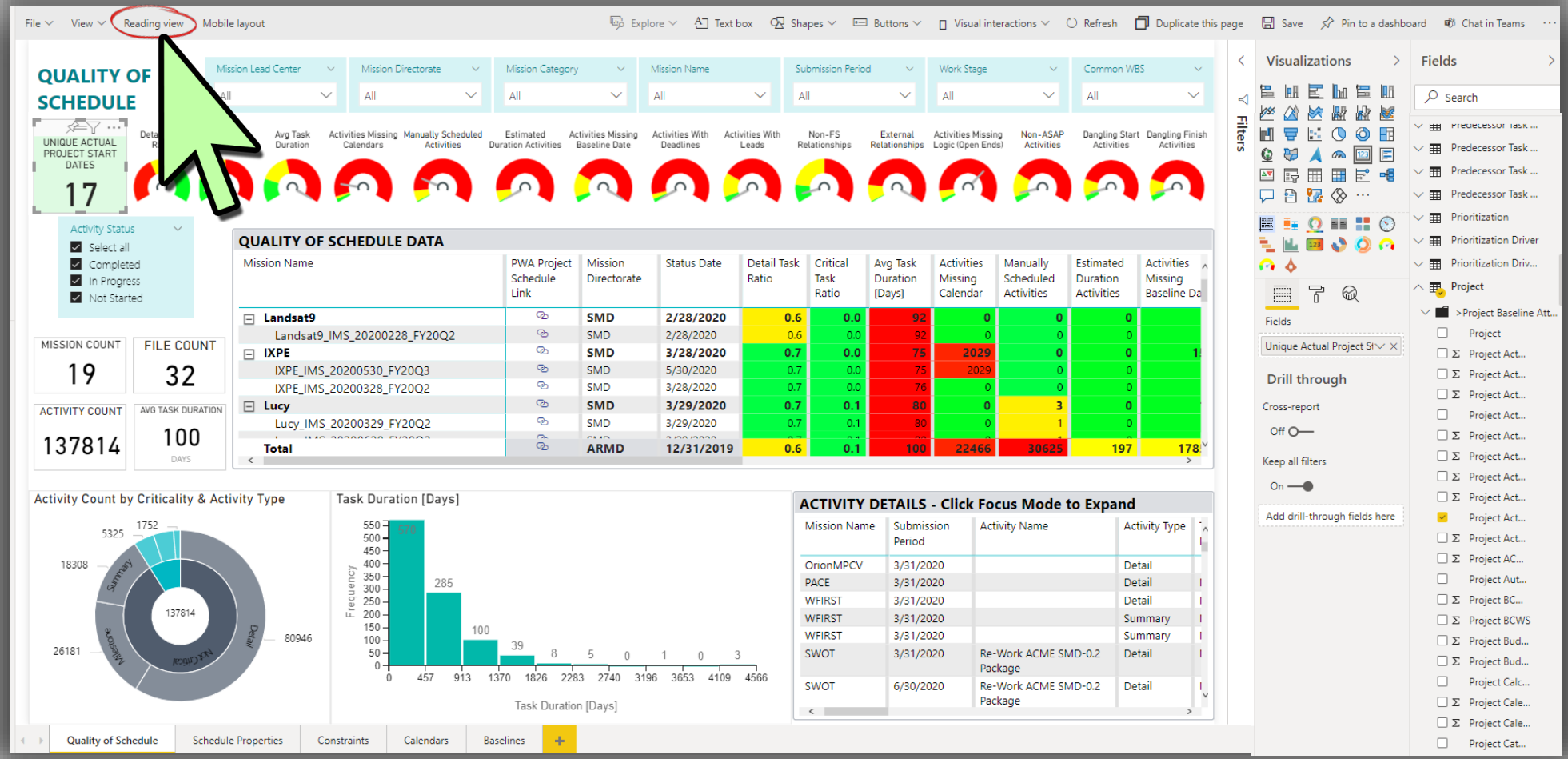

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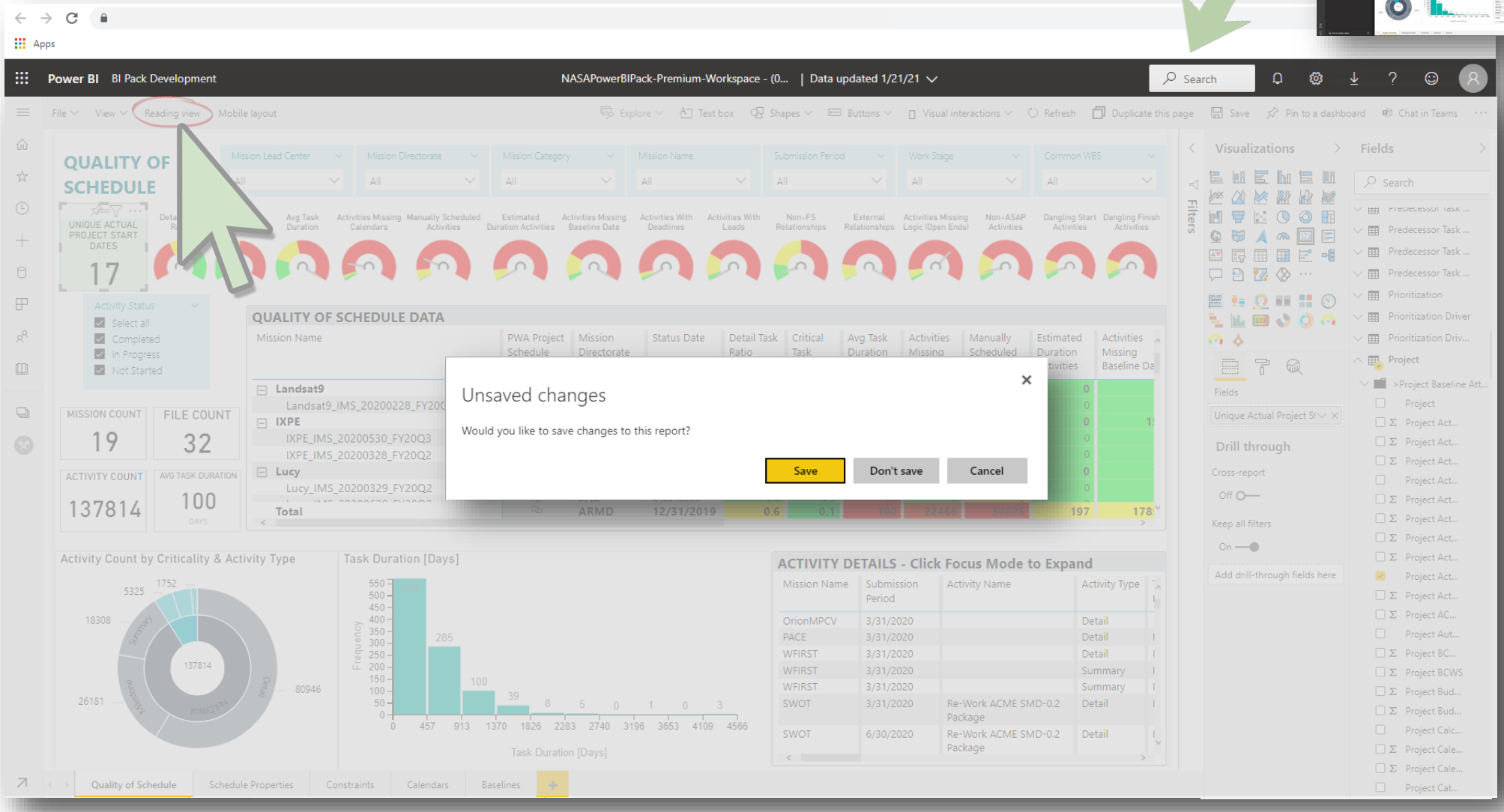

Edits can also be discarded by not saving them.

Edited Reports Can Be Saved From Power BI Online

Apps

Power BI | BI Pack Development | NASAPowerBIPack-Premium-Workspace - (0... | Data updated 1/21/21 | Search

Pages

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Report saved
This report has been saved.

QUALITY OF SCHEDULE

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UNIQUE ACTUAL PROJECT START DATES: 17

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Activity Status
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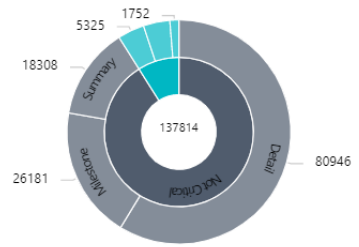

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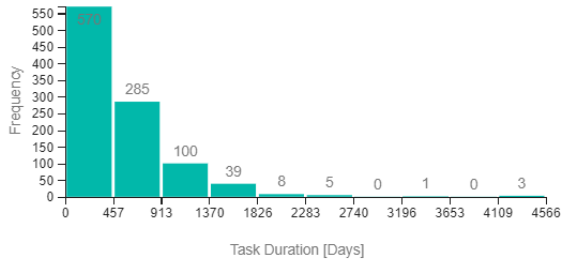

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SWOT	3/31/2020	Re-Work ACME SMD-0.2 Package	Detail
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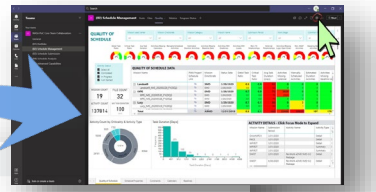
Saved edits are immediately seen in *Reading View*.

Power BI Online Edits Will Automatically Update in TEAMS



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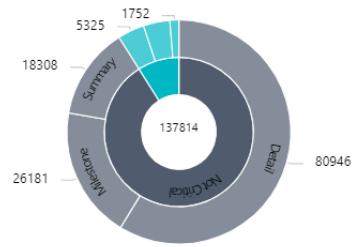
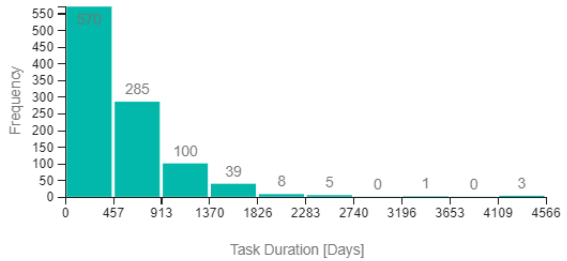


Task Duration [Days]



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Filters

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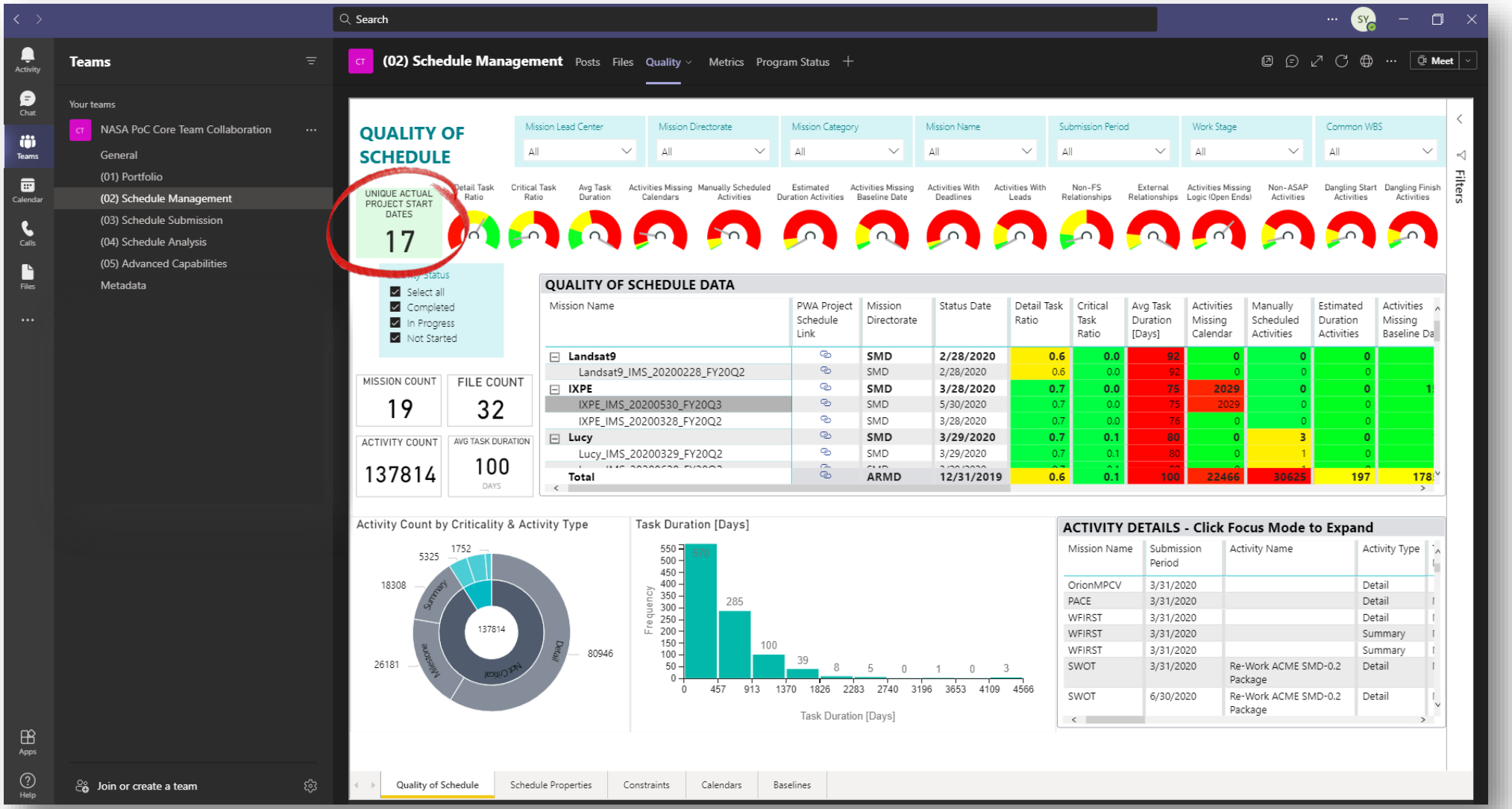
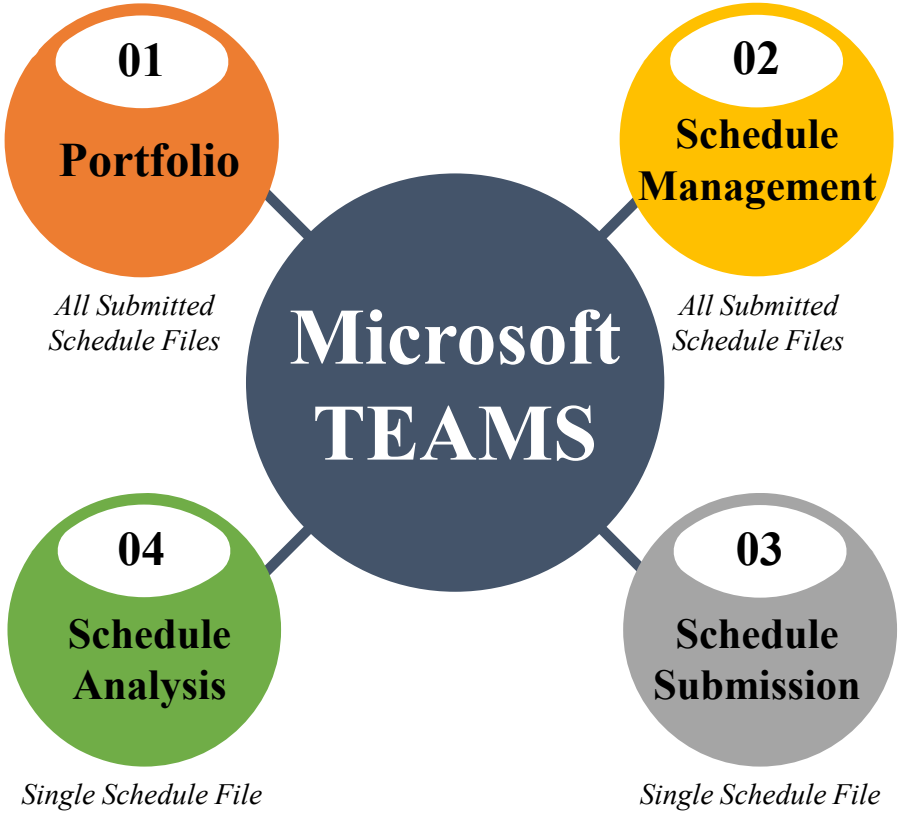


Saved edits are immediately propagated in the TEAMS report.

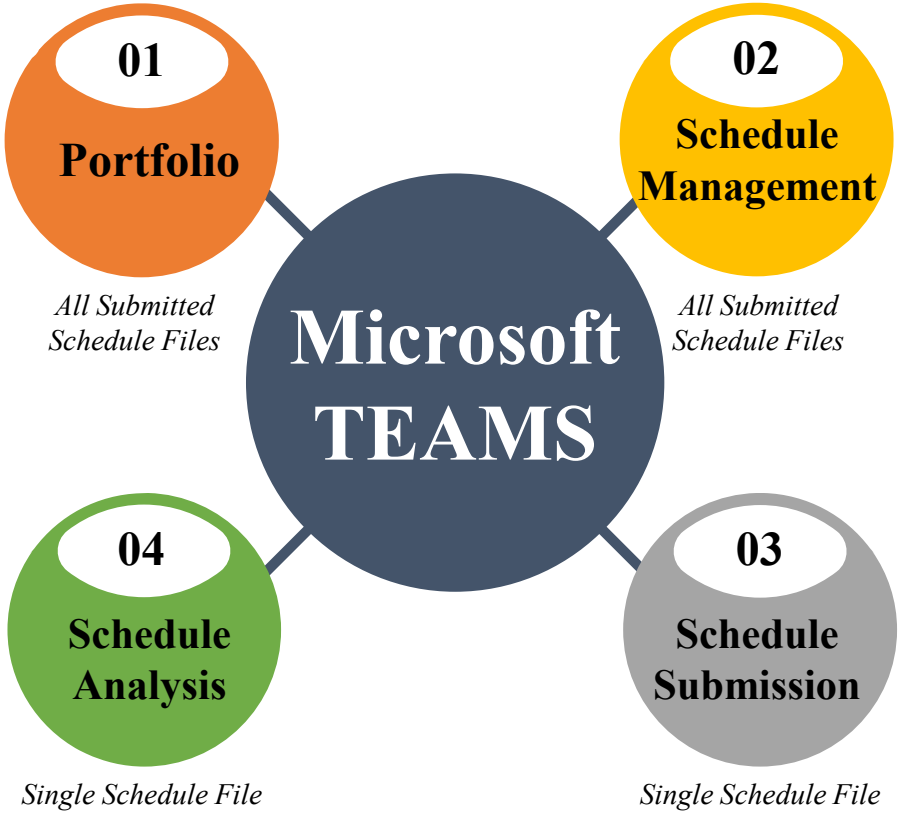
NASA Schedule Database Structured for Various Roles



Four channels are available for different roles or security settings. Each channel has its own unique tabs and pages.

NASA Schedule Database Structured for Various Roles

Director has a high-level view of the entire portfolio of submitted files with sparse yet concise information.



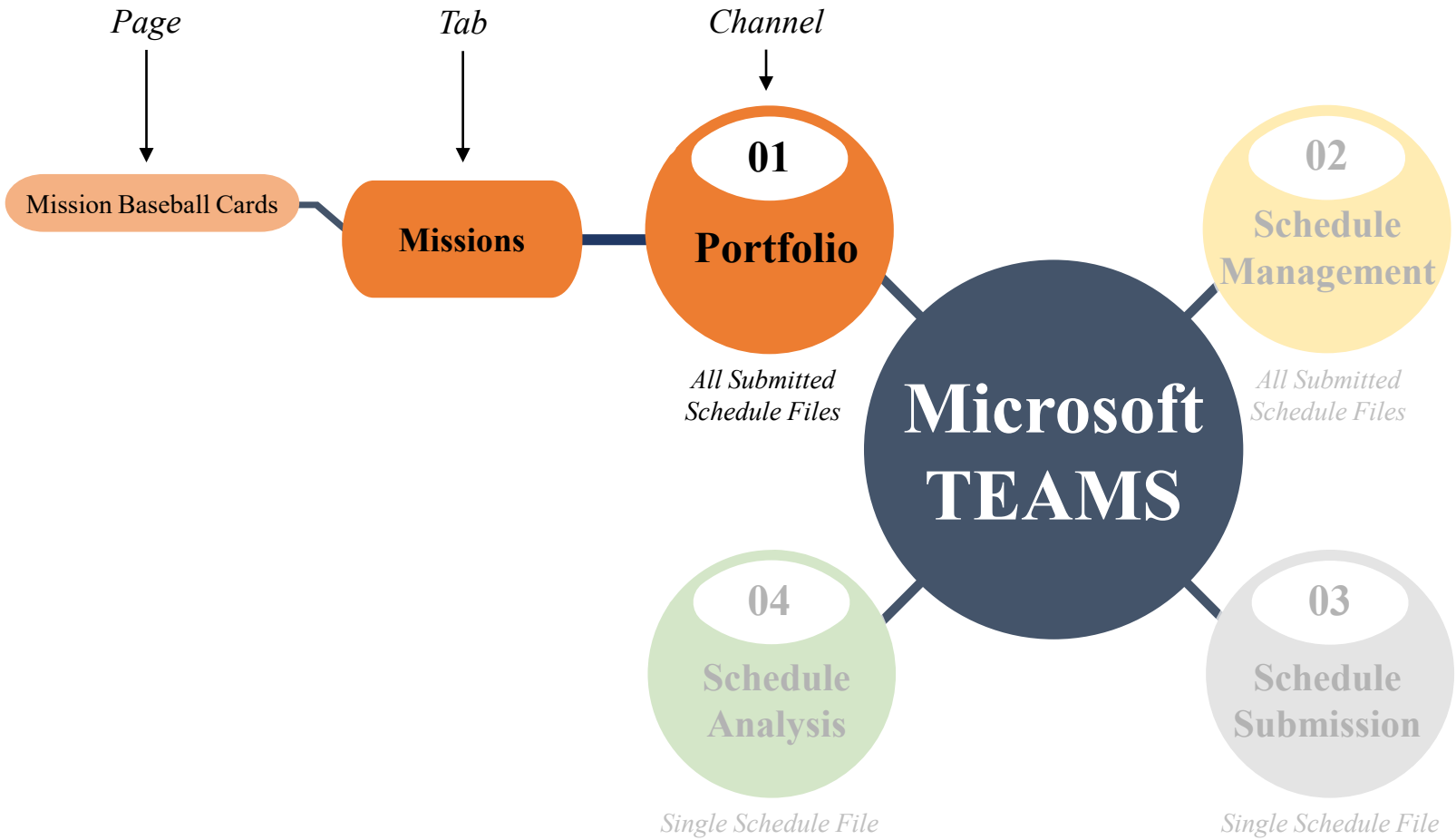
Manager has a high-level view of all schedule files to assess general trends of schedule quality across the portfolio and to improve upon NASA best scheduling practices.

Schedule Analyst has the lowest level details that give insight into past performance and trends to help recognize future risk areas.

Schedule Submitter sees details that relay how fully the schedule is populated and informed.

Each Channel can have its own security settings to allow certain users access.

NASA Schedule Database Structured for Various Roles



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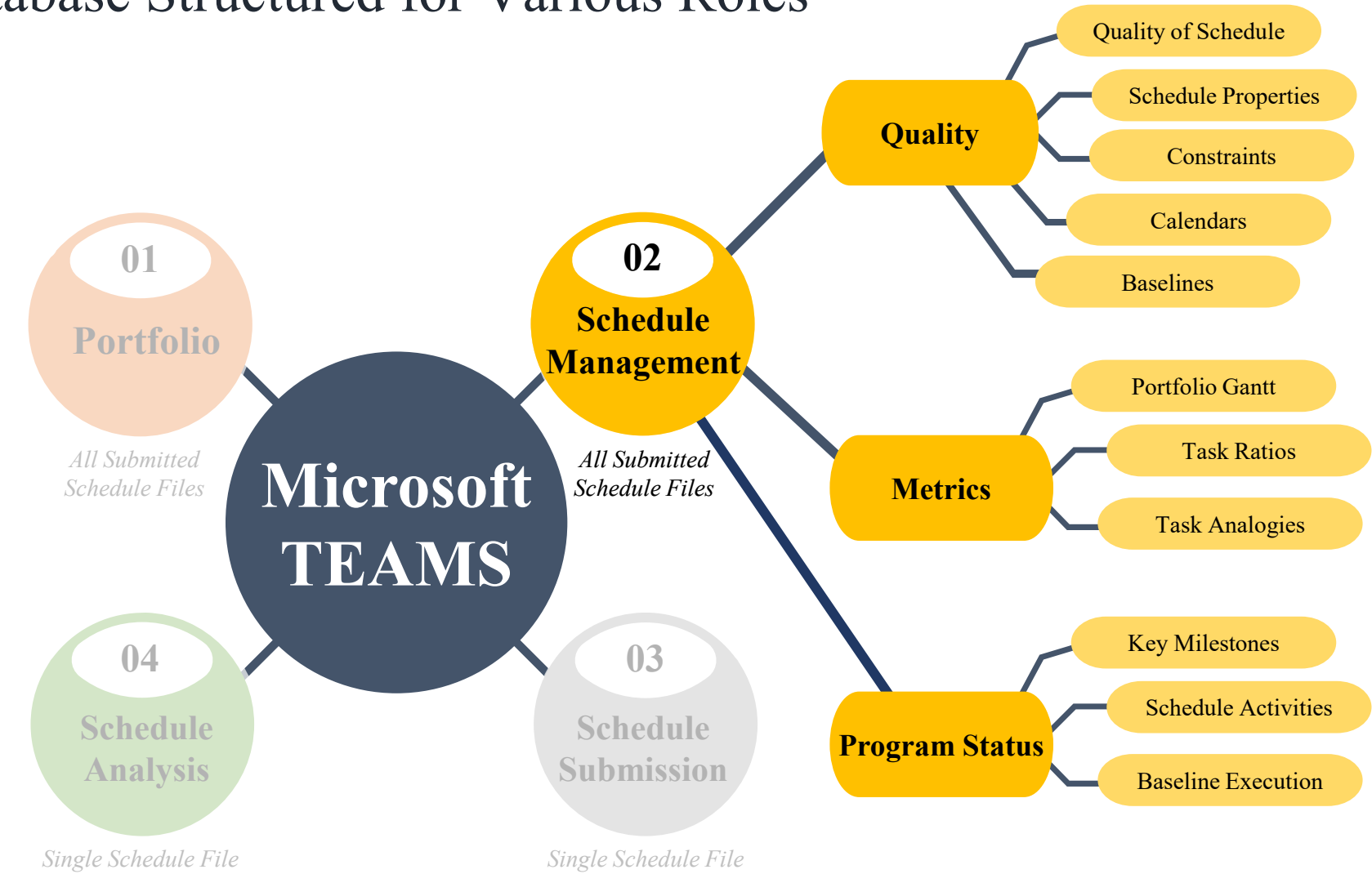
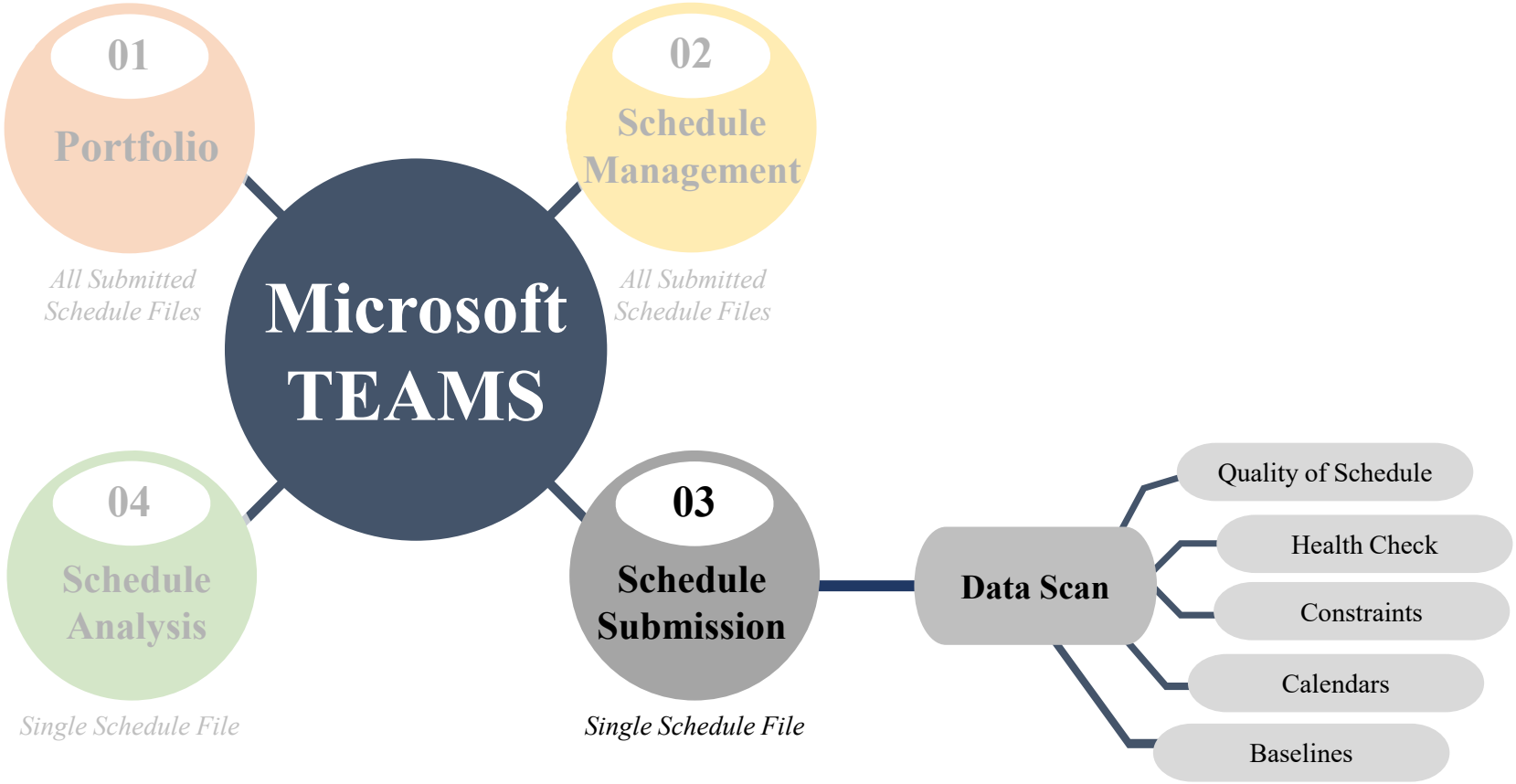
NASA Schedule Database Structured for Various Roles



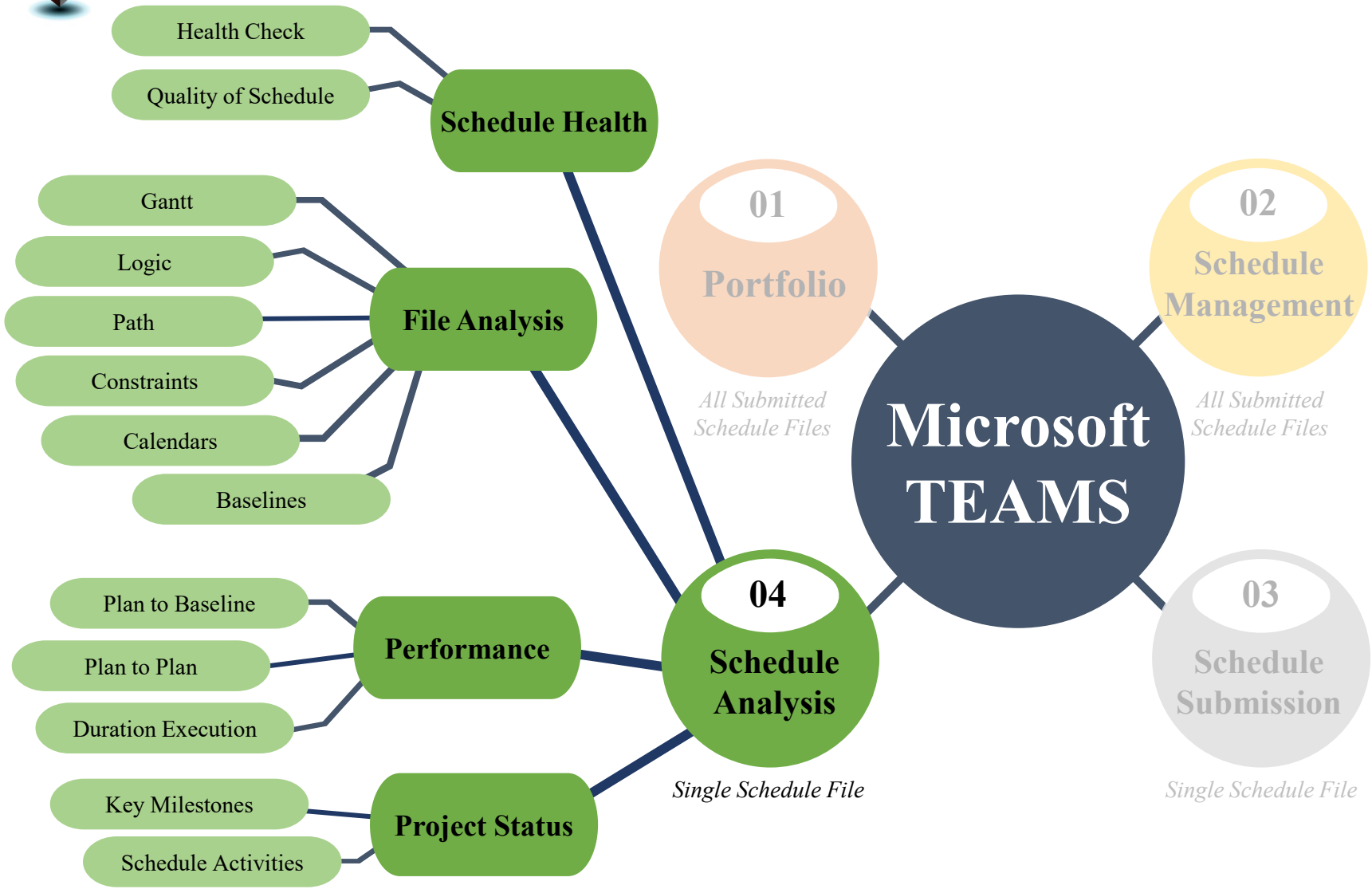
Manager has a high-level view of all schedule files to assess general trends of schedule quality across the portfolio.

NASA Schedule Database Structured for Various Roles



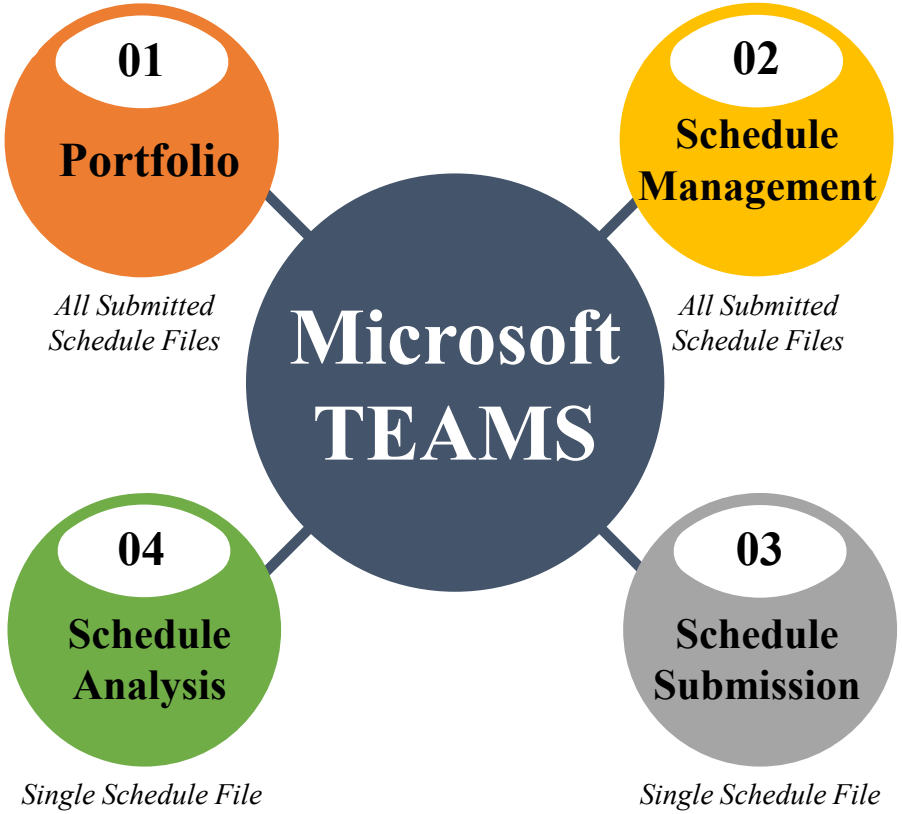
Submitter sees details that relay how fully the schedule is populated and informed.

NASA Schedule Database Structured for Various Roles

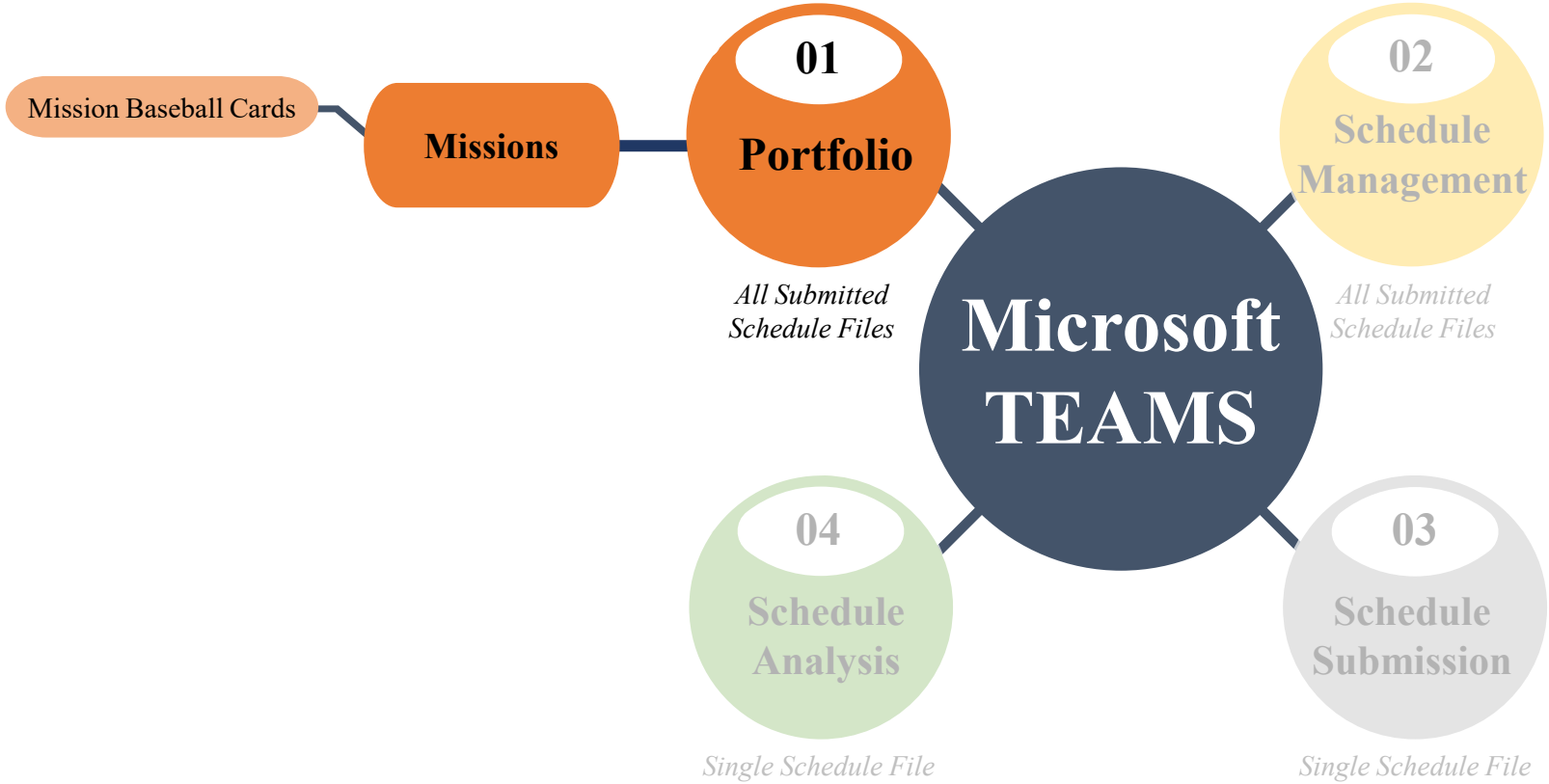


Analyst has the lowest level details that give insight into past performance and trends to help recognize future risk areas.

NASA Schedule Database Structured for Various Roles



Portfolio Channel



Portfolio || Missions || **Mission Baseball Cards**

MISSION BASEBALL CARDS

The left table shows Missions with Project files published to Project Server. Some Missions have multiple published files (i.e., multiple Submission Periods). Activity Count is across all files for a given Mission.

Mission Lead Center: All | Mission Directorate: All | Mission Category: All

19 Missions | 32 Project Files

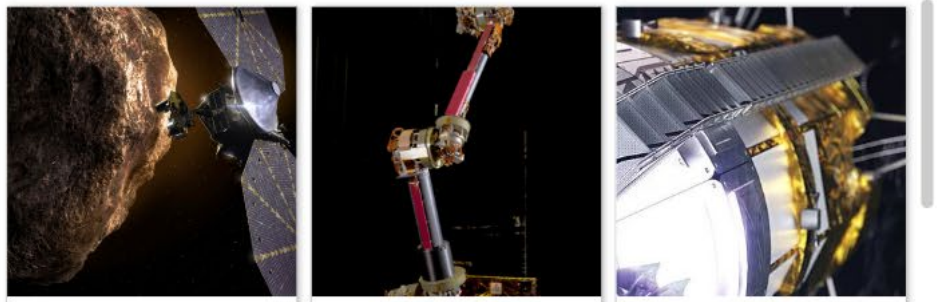
PUBLISHED PROJECT FILES BY MISSION

Mission Name	Mission Directorate	Mission Count	File Count	Activity Count
ArtemisArtemis1	HEOMD	1	1	513
EGSArtemis1	HEOMD	1	2	566
Euclid	SMD	1	1	683
Gateway	HEOMD	1	2	1830
IXPE	SMD	1	2	4023
JPSS2	SMD	1	2	1196
Landsat9	SMD	1	1	7323
LBFD	ARMD	1	2	7088
Lucy	SMD	1	3	8586
OrionArtemis1	HEOMD	1	1	2641
OrionMPCV	HEOMD	1	1	2391
PACE	SMD	1	1	7922
RestoreL	STMD	1	2	24484
SLSArtemis1	HEOMD	1	1	824
SLSArtemis2	HEOMD	1	1	551
SWOT	SMD	1	3	30155
TSIS2	SMD	1	3	4316
WFIRST	SMD	1	1	30573
X57	ARMD	1	2	2149
Total		**19**	**32**	**137814**

MISSION & THUMBNAILS

Mission Name	Project Thumbnail	Activity Count
Lucy		8586
RestoreL		24484
SLSArtemis2		551
LBFD		7088
ArtemisArtemis1		513
EGSArtemis1		566
X57		2149
Total		**137814**

MISSION & THUMBNAILS



Lucy
Lucy

Restore-L In-space Robotic Servicing
RestoreL

SLS Artemis 2
SLSArtemis2

Low-Boom Flight Demonstrator

Artemis Program Launch 1
ArtemisArtemis1 •

EGS Artemis 1
EGSArtemis1

Mission Baseball Cards provide a quick overview of all submitted project files.

Portfolio || Missions || **Mission Baseball Cards**

MISSION BASEBALL CARDS

The left table shows Missions with Project files published to Project Server. Some Missions have multiple published files (i.e., multiple Submission Periods). Activity Count is across all files for a given Mission.

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19 Missions | 32 Project Files

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PACE	SMD	1	1	7922
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SLSArtemis1	HEOMD	1	1	824
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LBFD		7088
ArtemisArtemis1		513
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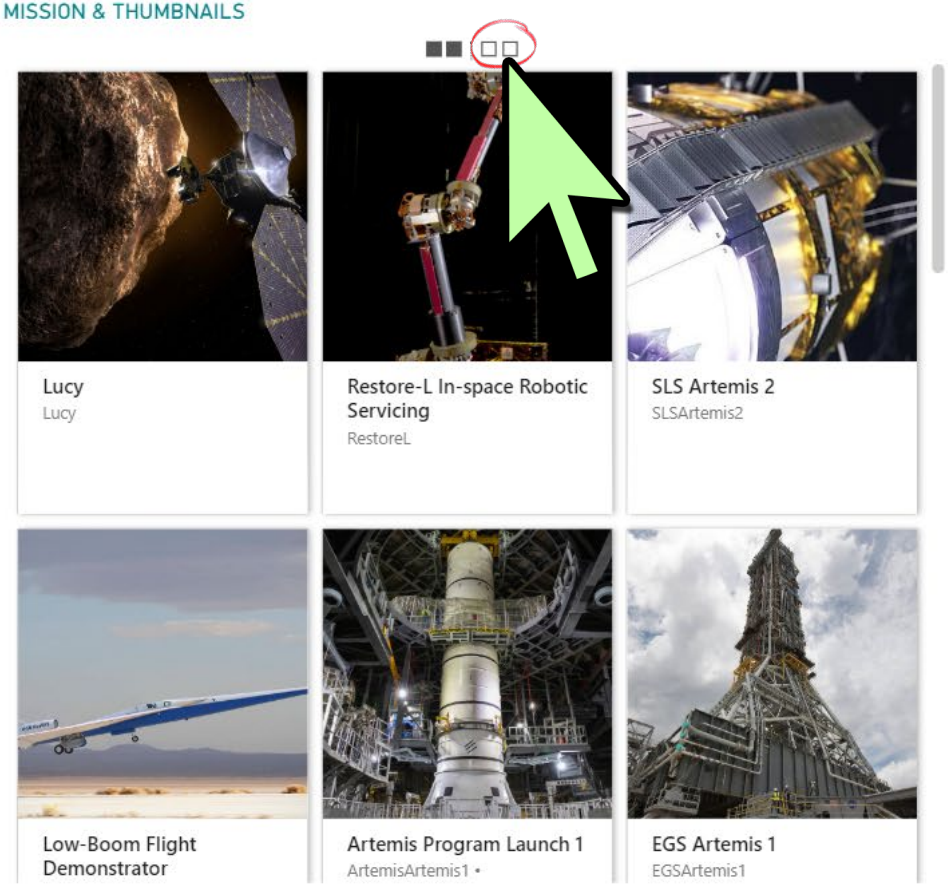
X57		2149
Total		**137814**

MISSION & THUMBNAILS



Additional information can be displayed in various ways, such as by flipping the mission baseball cards.

Portfolio || Missions || **Mission Baseball Cards**

MISSION BASEBALL CARDS

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19 Missions | 32 Project Files

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MISSION & THUMBNAILS

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EGSArtemis1		566
X57		2149
Total		**137814**

MISSION & THUMBNAILS

Lucy
Lucy
Comments
Theme Planetary Sci
Program Discovery
Category CAT 2
Scheduling S
Status Developmen
Lead Center GSFC
Task Count 8586
Directorate SMD
Focus Planetary


Restore-L In-space Robotic Servicing
RestoreL
Comments
Theme Exploration T
Program Technology D
Category CAT 2
Scheduling S
Status Developmen
Lead Center GSFC
Task Count 24484
Directorate STMD


SLS Artemis 2
SLSArtemis2
Comments
Theme Exploration S
Program Space Launc
Category CAT 1
Scheduling S
Status Developmen
Lead Center MSFC
Task Count 551
Directorate HEOMD
Focus Transport

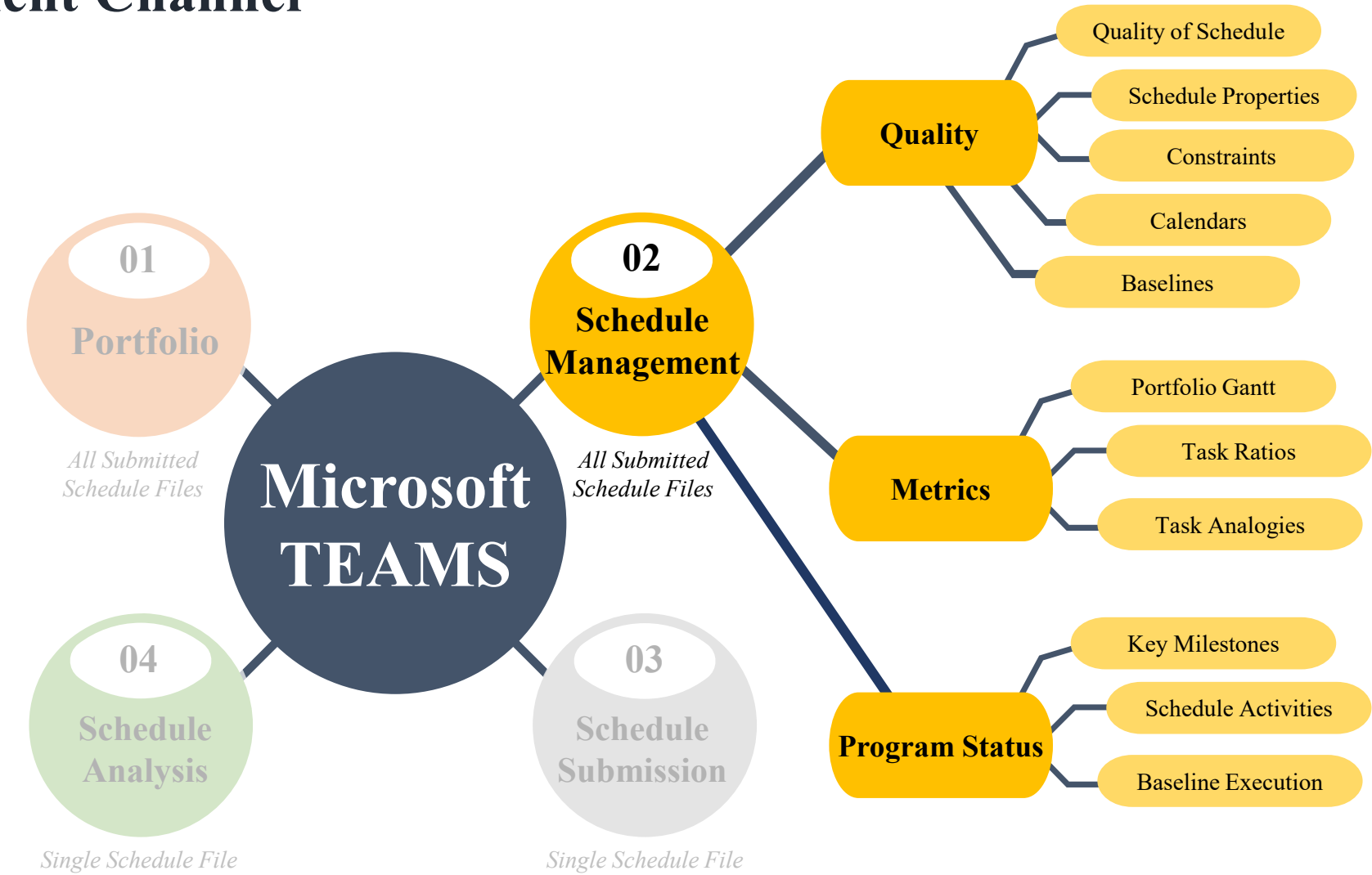

Low-Boom Flight Demonstrator
LBFD • https://www.nasa.gov
Comments
Theme Aeronautics
Program Integrated A
Category DNF
Scheduling S
Status Developmen
Lead Center LaRC
Task Count 7088
Directorate ARMD

Artemis Program Launch 1
ArtemisArtemis1 • https://ww
Comments
Theme Exploration S
Program DNF
Category DNF
Scheduling S
Status DNF
Lead Center DNF
Task Count 513
Directorate HEOMD
Focus DNF

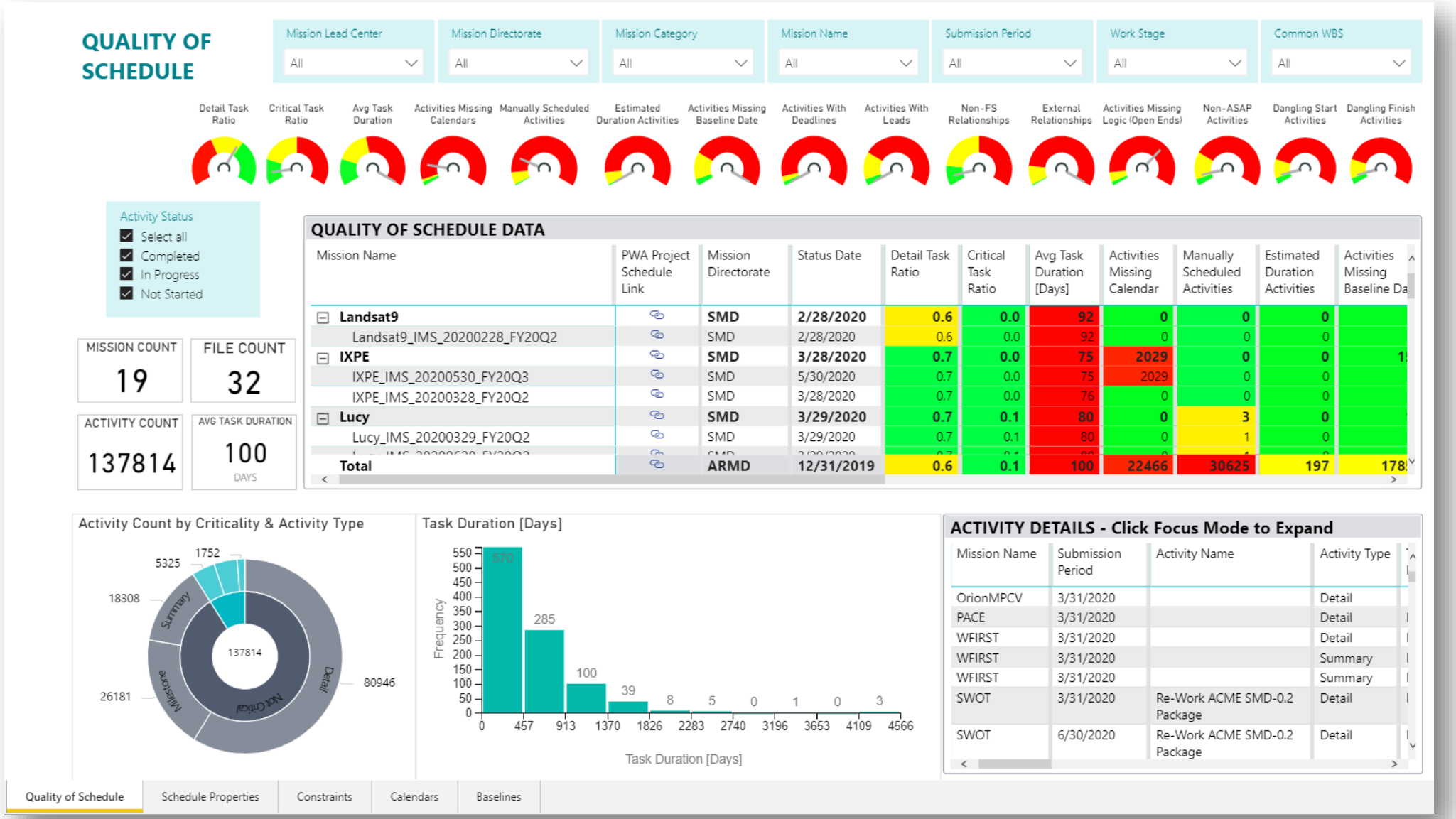
EGS Artemis 1
EGSArtemis1
Comments
Theme Exploration S
Program Exploration
Category CAT 1
Scheduling S
Status Developmen
Lead Center KSC
Task Count 566
Directorate HEOMD
Focus Ground Syst

✓ Information from different sources can be effectively integrated.

Schedule Management Channel



Schedule Management || Quality || **Quality of Schedule**



A Quality of Schedule report provides an easy way to gauge all submitted schedules.

Schedule Management || Quality || **Quality of Schedule**

QUALITY OF SCHEDULE

Mission Lead Center: All | Mission Directorate: All | Mission Category: All | Mission Name: All | Submission Period: All | Work Stage: All | Common WBS: All

Detail Task Ratio | Critical Task Ratio | Avg Task Duration | Activities Missing Calendars | Manually Scheduled Activities | Estimated Duration Activities | Activities Missing Baseline Date | Activities With Deadlines | Activities With Leads | Non-FS Relationships | External Relationships | Activities Missing Logic (Open Ends) | Non-ASAP Activities | Dangling Start Activities | Dangling Finish Activities

Activity Status
- [x] Select all
- [x] Completed
- [x] In Progress
- [x] Not Started

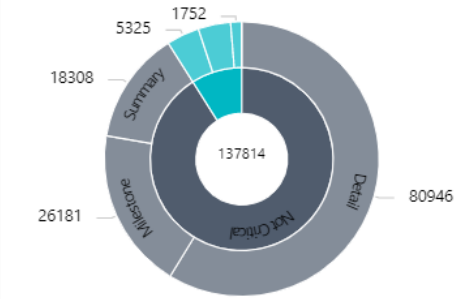
MISSION COUNT	FILE COUNT
19	32

ACTIVITY COUNT	AVG TASK DURATION
137814	100 DAYS

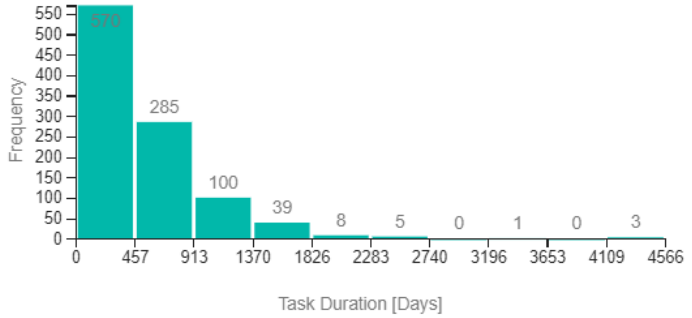
QUALITY OF SCHEDULE DATA

Mission Name	PWA Project Schedule Link	Mission Directorate	Status Date	Detail Task Ratio	Critical Task Ratio	Avg Task Duration [Days]	Activities Missing Calendar	Manually Scheduled Activities	Estimated Duration Activities	Activities Missing Baseline Da
Landsat9		**SMD**	**2/28/2020**	**0.6**	**0.0**	**92**	**0**	**0**	**0**	
Landsat9_IMS_20200228_FY20Q2		SMD	2/28/2020	0.6	0.0	92	0	0	0	
IXPE		**SMD**	**3/28/2020**	**0.7**	**0.0**	**75**	**2029**	**0**	**0**	**1**
IXPE_IMS_20200530_FY20Q3		SMD	5/30/2020	0.7	0.0	75	2029	0	0	
IXPE_IMS_20200328_FY20Q2		SMD	3/28/2020	0.7	0.0	76	0	0	0	
Lucy		**SMD**	**3/29/2020**	**0.7**	**0.1**	**80**	**0**	**3**	**0**	
Lucy_IMS_20200329_FY20Q2		SMD	3/29/2020	0.7	0.1	80	0	1	0	
Total		**ARMD**	**12/31/2019**	**0.6**	**0.1**	**100**	**22466**	**30625**	**197**	**178**

Activity Count by Criticality & Activity Type



Task Duration [Days]



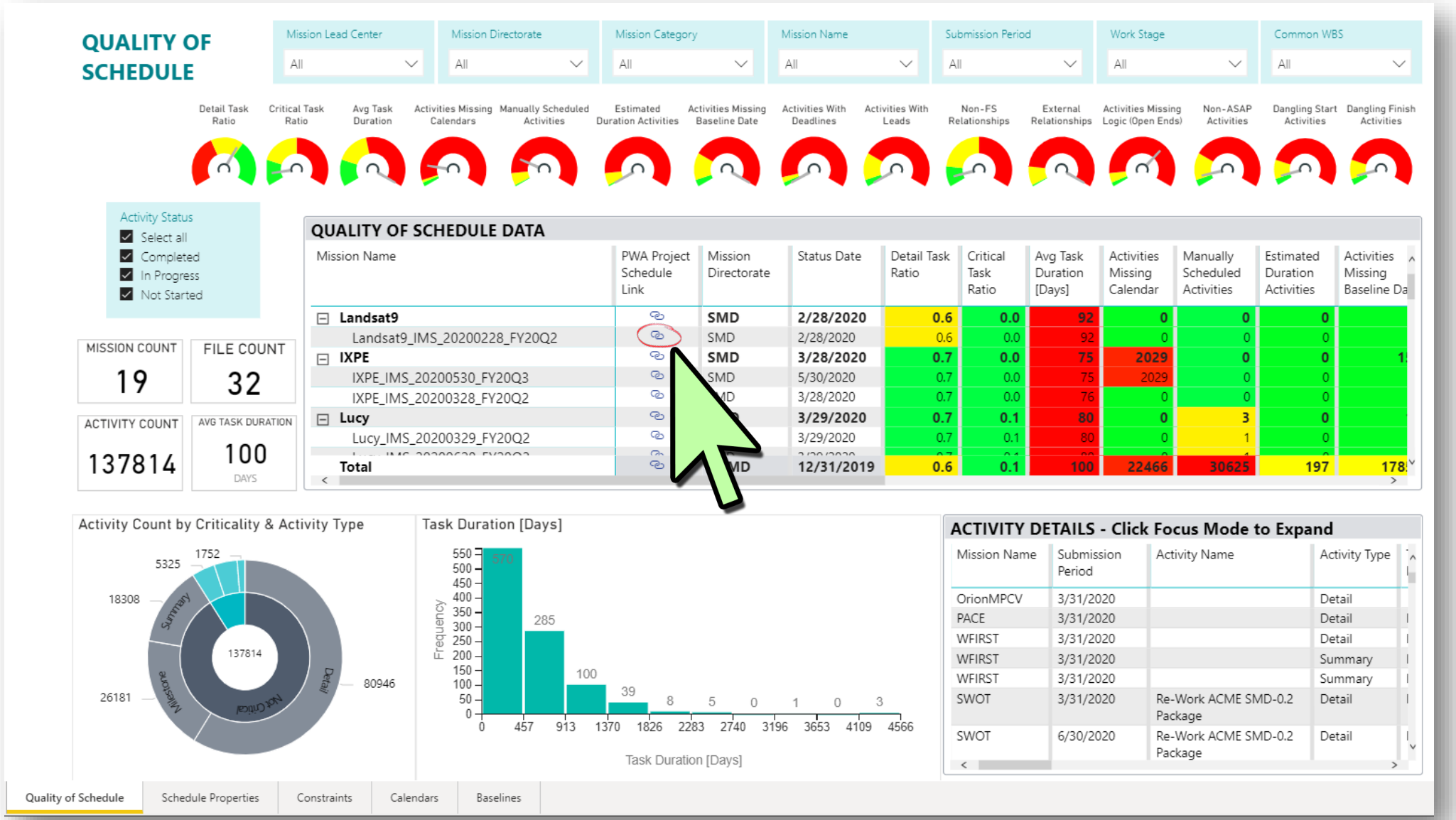
ACTIVITY DETAILS - Click Focus Mode to Expand

Mission Name	Submission Period	Activity Name	Activity Type
OrionMPCV	3/31/2020		Detail
PACE	3/31/2020		Detail
WFIRST	3/31/2020		Detail
WFIRST	3/31/2020		Summary
WFIRST	3/31/2020		Summary
SWOT	3/31/2020	Re-Work ACME SMD-0.2 Package	Detail
SWOT	6/30/2020	Re-Work ACME SMD-0.2 Package	Detail

Quality of Schedule | Schedule Properties | Constraints | Calendars | Baselines

Metric and benchmark survey results are incorporated into fuel gauges and color formatting.

Schedule Management || Quality || **Quality of Schedule**



Embedded links allow for quick and easy access to Project Web Apps (PWA).

Direct Access to Project Web Apps (PWA) From TEAMS

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Project

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Landsat9_IMS_20200228_FY20Q2

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Today | April 2021 | May 2021 | June 2021

Add tasks with dates to the timeline

ID	Mode	Task Name	Duration	Start	Finish	% Complete	Work	Resource Name	Task Predece
1		**L9 Schedule Control Sectio**	**1,653d**	**3/4/2015**	**9/30/2021**	**82%**	**0h**		
2		Start of Project	0d	3/4/2015	3/4/2015	100%	0h		
3		End of Project .	0d	9/30/2021	9/30/2021	0%	0h		98,4,5,6,7,8,9
4		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
5		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
6		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
7		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
8		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
9		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
10		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
11		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
12		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
13		(L-72) or Month 1 (LOE)	30d	3/4/2015	4/14/2015	100%	0h		2
14		(L-71) or Month 2 (LOE)	21d	4/15/2015	5/13/2015	100%	0h		13
15		(L-70) or Month 3 (LOE)	21d	5/14/2015	6/12/2015	100%	0h		14
16		(L-69) or Month 4 (LOE)	21d	6/15/2015	7/14/2015	100%	0h		15
17		(L-68) or Month 5 (LOE)	21d	7/15/2015	8/12/2015	100%	0h		16
18		(L-67) or Month 6 (LOE)	21d	8/13/2015	9/11/2015	100%	0h		17
19		(L-66) or Month 7 (LOE)	21d	9/14/2015	10/13/2015	100%	0h		18
20		(L-65) or Month 8 (LOE)	21d	10/14/2015	11/12/2015	100%	0h		19
21		(L-64) or Month 9 (LOE)	21d	11/13/2015	12/14/2015	100%	0h		20
22		(L-63) or Month 10 (LOE)	21d	12/15/2015	1/14/2016	100%	0h		21
23		(L-62) or Month 11 (LOE)	21d	1/15/2016	2/16/2016	100%	0h		22
24		(L-61) or Month 12 (LOE)	21d	2/17/2016	3/16/2016	100%	0h		23

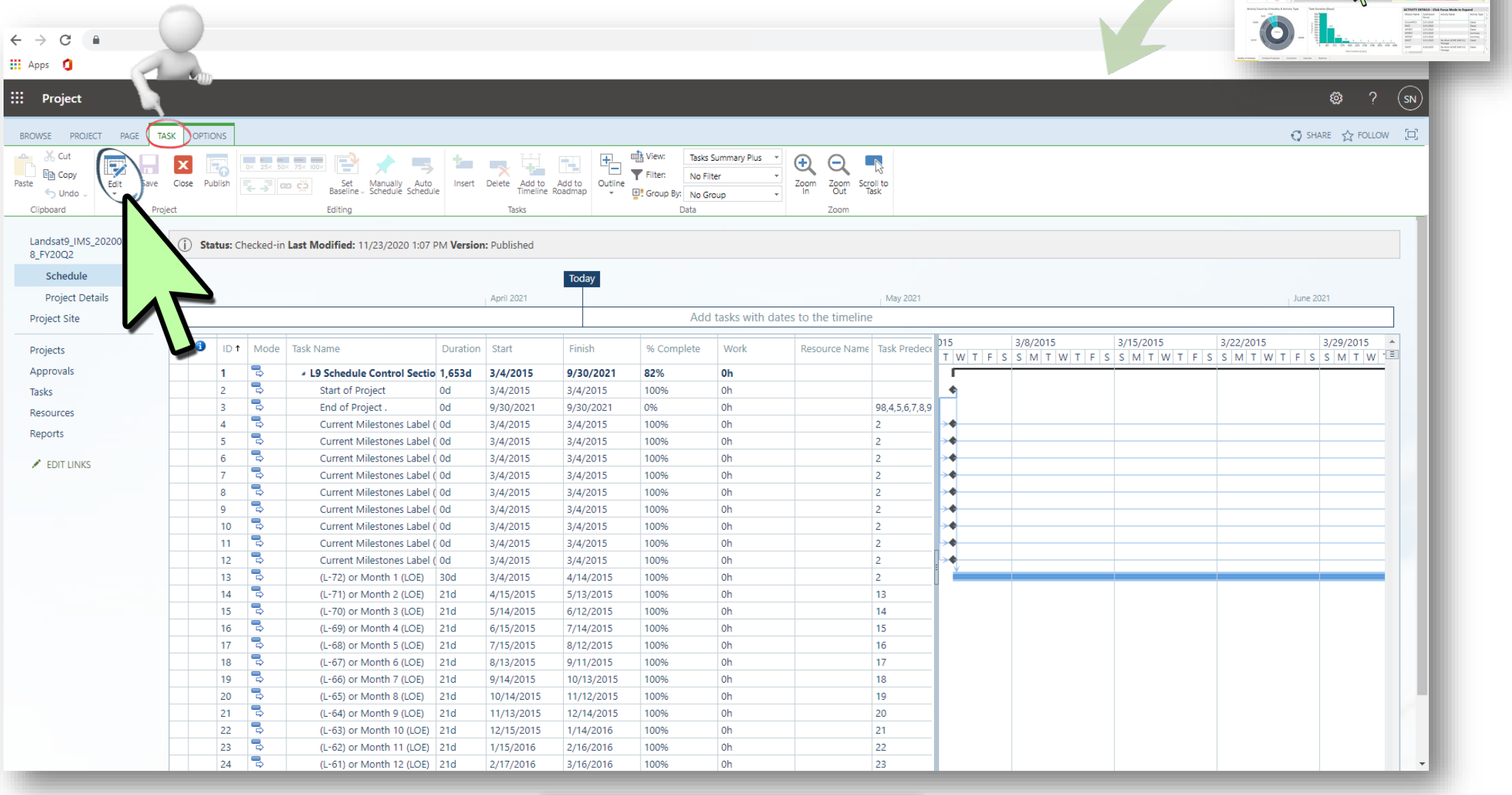
015 | 3/8/2015 | 3/15/2015 | 3/22/2015 | 3/29/2015

T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W

Clicking on embedded links opens a selected project file in the web browser through PWA.

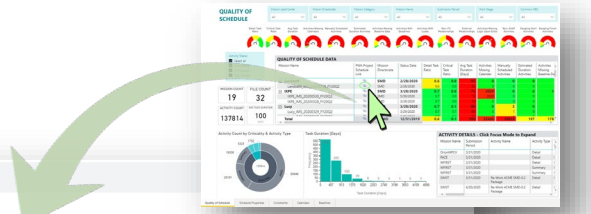
Check Out And Edit Projects Directly Within PWA

Check Out And Edit Projects Directly Within PWA



Or from the ***Task*** tab.

Check Out And Edit Projects Directly Within PWA



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Landsat9_IMS_20200228_FY20Q2

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6		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
7		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
8		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
9		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
10		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
11		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
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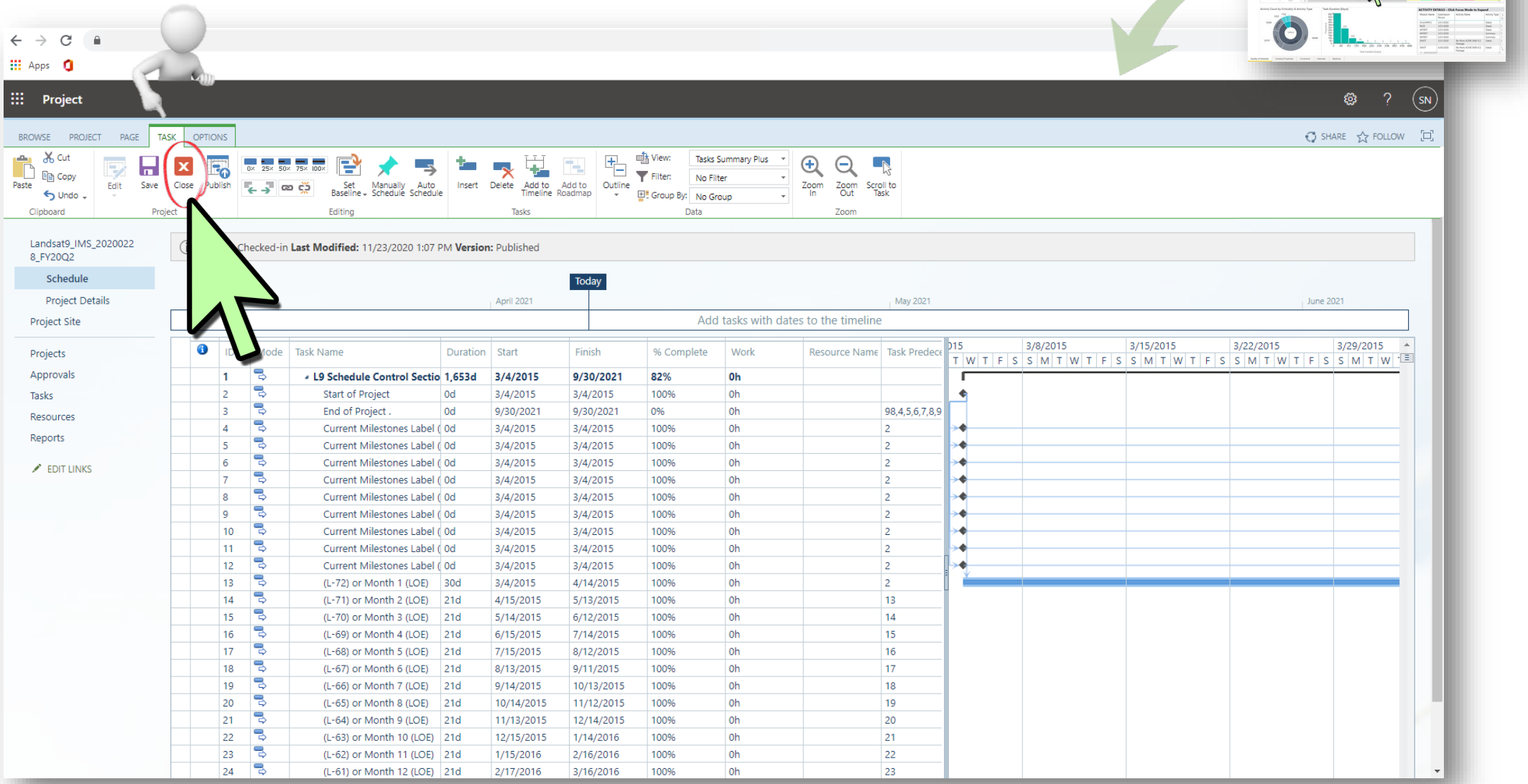
19		(L-66) or Month 7 (LOE)	21d	9/14/2015	10/13/2015	100%	0h		18
20		(L-65) or Month 8 (LOE)	21d	10/14/2015	11/12/2015	100%	0h		19
21		(L-64) or Month 9 (LOE)	21d	11/13/2015	12/14/2015	100%	0h		20
22		(L-63) or Month 10 (LOE)	21d	12/15/2015	1/14/2016	100%	0h		21
23		(L-62) or Month 11 (LOE)	21d	1/15/2016	2/16/2016	100%	0h		22
24		(L-61) or Month 12 (LOE)	21d	2/17/2016	3/16/2016	100%	0h		23

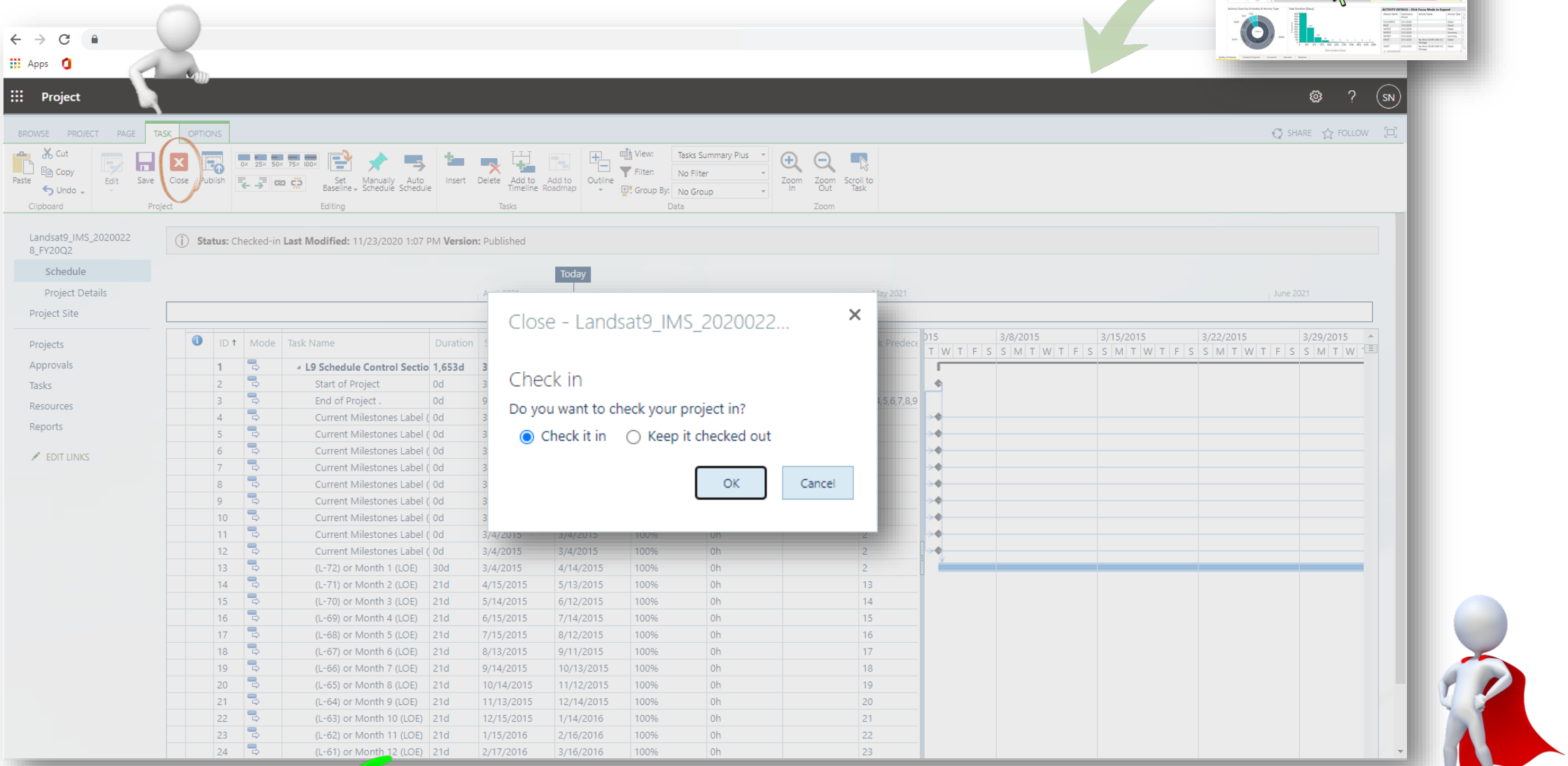
3/8/2015 | 3/15/2015 | 3/22/2015 | 3/29/2015

Check In Projects Directly Within PWA



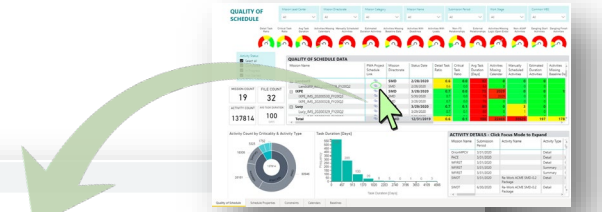
Easily save edits and check a project file back in.

Check In Projects Directly Within PWA



The PWA check-in prompt can help build good habits.

Easily View Other Submitted Projects



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- Resource
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1		**L9 Schedule Control Sectio**	**1,653d**	**3/4/2015**	**9/30/2021**	**82%**	**0h**		
2		Start of Project	0d	3/4/2015	3/4/2015	100%	0h		
3		End of Project .	0d	9/30/2021	9/30/2021	0%	0h		98,4,5,6,7,8,9
4		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
5		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
6		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
7		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
8		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
9		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
10		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
11		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
12		Current Milestones Label (	0d	3/4/2015	3/4/2015	100%	0h		2
13		(L-72) or Month 1 (LOE)	30d	3/4/2015	4/14/2015	100%	0h		2
14		(L-71) or Month 2 (LOE)	21d	4/15/2015	5/13/2015	100%	0h		13
15		(L-70) or Month 3 (LOE)	21d	5/14/2015	6/12/2015	100%	0h		14
16		(L-69) or Month 4 (LOE)	21d	6/15/2015	7/14/2015	100%	0h		15
17		(L-68) or Month 5 (LOE)	21d	7/15/2015	8/12/2015	100%	0h		16
18		(L-67) or Month 6 (LOE)	21d	8/13/2015	9/11/2015	100%	0h		17
19		(L-66) or Month 7 (LOE)	21d	9/14/2015	10/13/2015	100%	0h		18
20		(L-65) or Month 8 (LOE)	21d	10/14/2015	11/12/2015	100%	0h		19
21		(L-64) or Month 9 (LOE)	21d	11/13/2015	12/14/2015	100%	0h		20
22		(L-63) or Month 10 (LOE)	21d	12/15/2015	1/14/2016	100%	0h		21
23		(L-62) or Month 11 (LOE)	21d	1/15/2016	2/16/2016	100%	0h		22
24		(L-61) or Month 12 (LOE)	21d	2/17/2016	3/16/2016	100%	0h		23

3/8/2015 | 3/15/2015 | 3/22/2015 | 3/29/2015

A list of all (or a subset of) submitted projects can be accessed.

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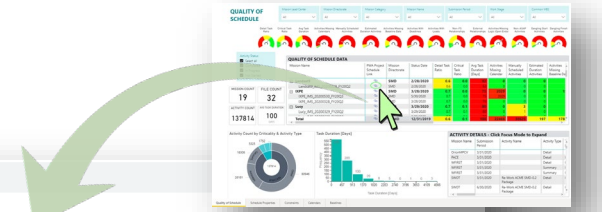

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IMSConsol_0010	LBFD_IMS_20200630_FY20Q3	3/17/2016	2/23/2024	72%	32,744h	1,910d	Shanling Yang @NASAPoC	12/1/2020	IMS Consolidate	IMS	LBFD_IM
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100047	PACE_IMS_20200415_FY20Q2	1/13/2015	7/29/2026	73%	7,622.5h	2,910d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	PACE_IM
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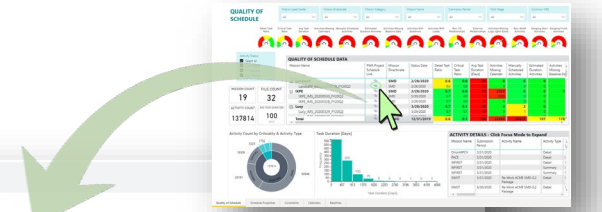

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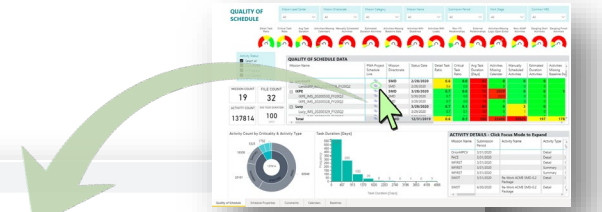

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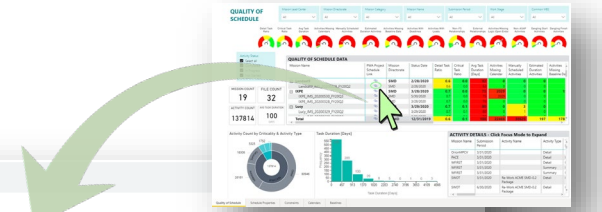

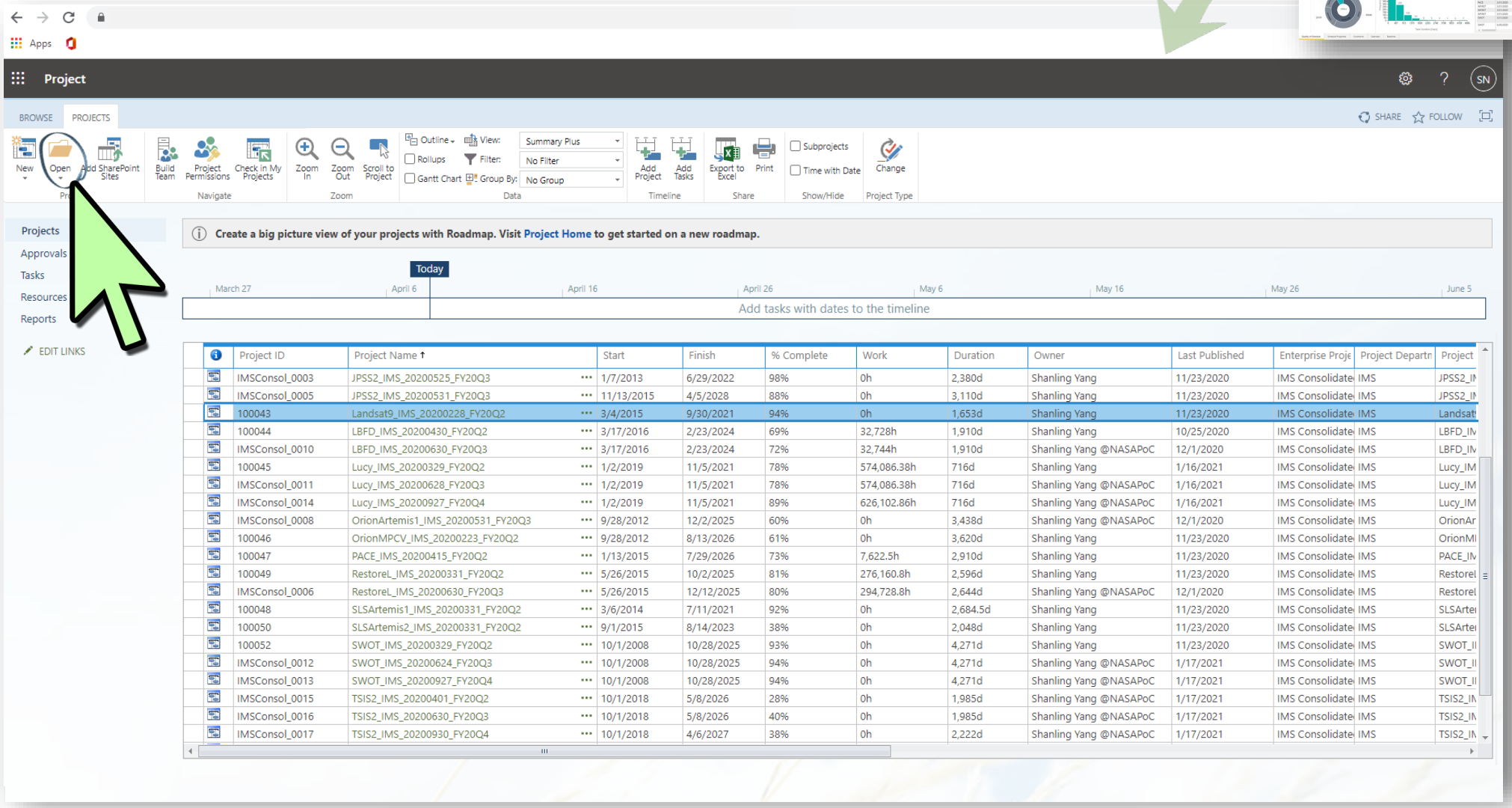

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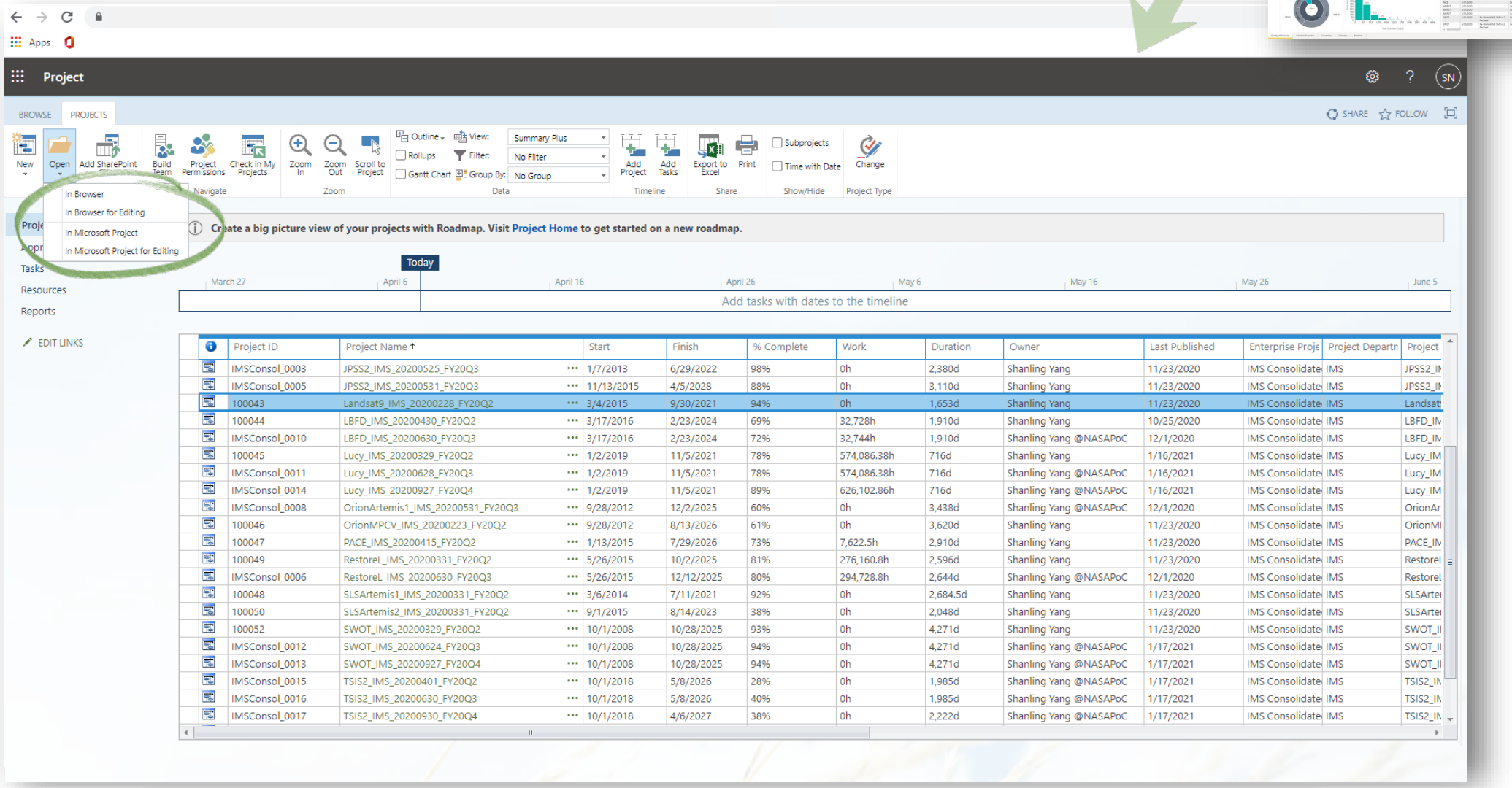
100047	PACE_IMS_20200415_FY20Q2	1/13/2015	7/29/2026	73%	7,622.5h	2,910d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	PACE_IM
100049	RestoreL_IMS_20200331_FY20Q2	5/26/2015	10/2/2025	81%	276,160.8h	2,596d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	RestoreL
IMSConsol_0006	RestoreL_IMS_20200630_FY20Q3	5/26/2015	12/12/2025	80%	294,728.8h	2,644d	Shanling Yang @NASAPoC	12/1/2020	IMS Consolidate	IMS	RestoreL
100048	SLSArtemis1_IMS_20200331_FY20Q2	3/6/2014	7/11/2021	92%	0h	2,684.5d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SLSArte
100050	SLSArtemis2_IMS_20200331_FY20Q2	9/1/2015	8/14/2023	38%	0h	2,048d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SLSArte
100052	SWOT_IMS_20200329_FY20Q2	10/1/2008	10/28/2025	93%	0h	4,271d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SWOT_II
IMSConsol_0012	SWOT_IMS_20200624_FY20Q3	10/1/2008	10/28/2025	94%	0h	4,271d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	SWOT_II
IMSConsol_0013	SWOT_IMS_20200927_FY20Q4	10/1/2008	10/28/2025	94%	0h	4,271d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	SWOT_II
IMSConsol_0015	TSIS2_IMS_20200401_FY20Q2	10/1/2018	5/8/2026	28%	0h	1,985d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN
IMSConsol_0016	TSIS2_IMS_20200630_FY20Q3	10/1/2018	5/8/2026	40%	0h	1,985d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN
IMSConsol_0017	TSIS2_IMS_20200930_FY20Q4	10/1/2018	4/6/2027	38%	0h	2,222d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN

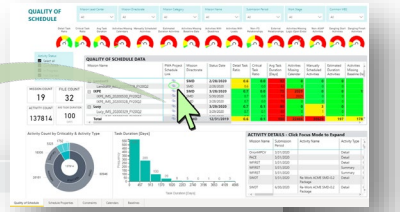
Easily select any available project to view or edit.

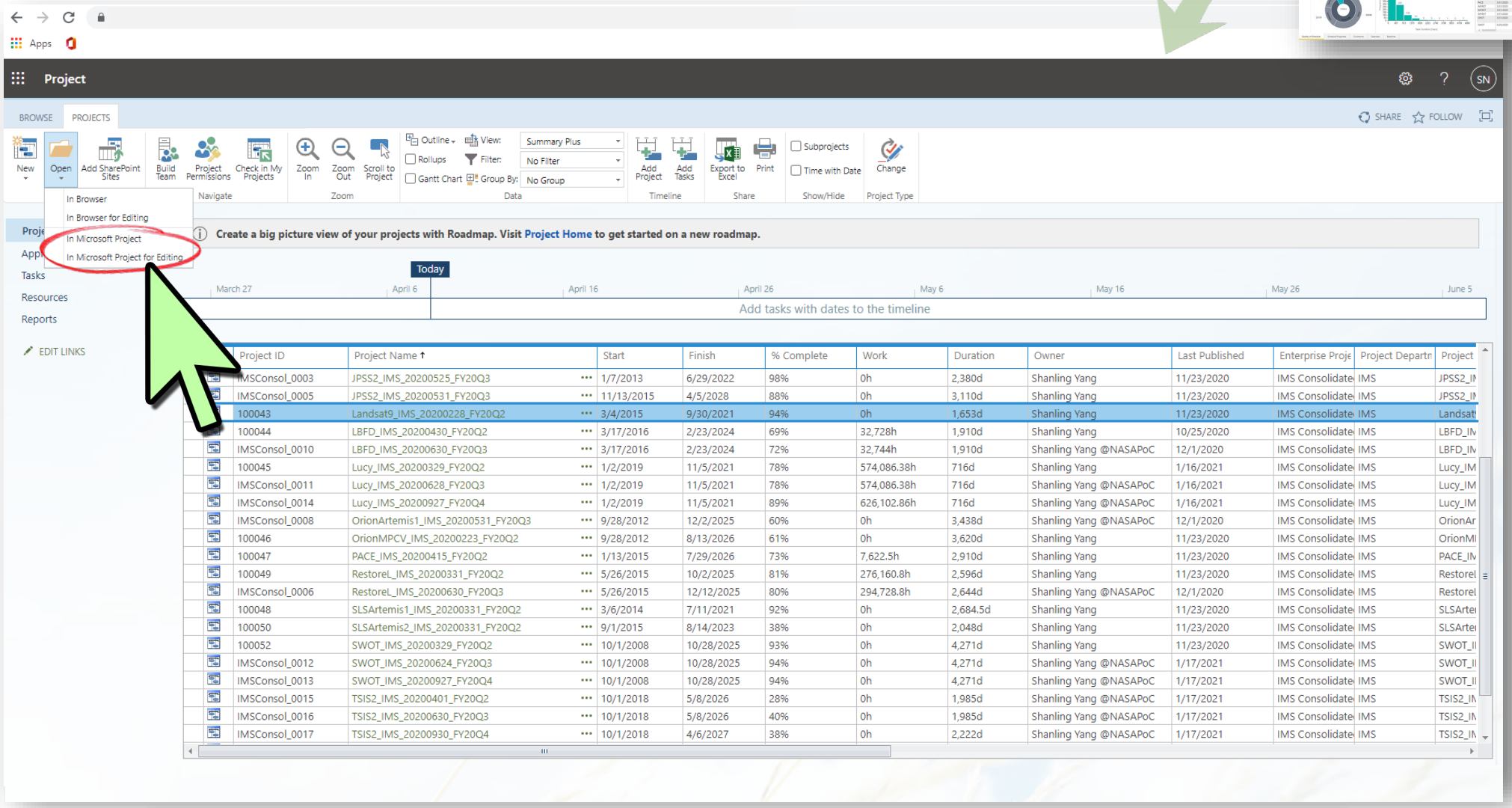
Project Files Can Be Opened in PWA or Desktop Project



Project files can be opened and edited in the browser (PWA) or Desktop Project.

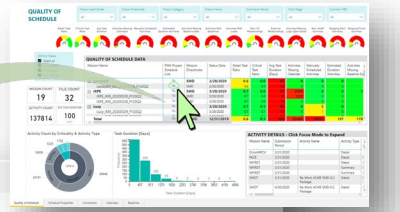
Opening a Project File in Desktop Project Is a Click Away





Project files can be opened and edited in the browser (PWA) or Desktop Project.

Opening a Project File in Desktop Project Is a Click Away



Open Project?

https://nasapoc.sharepoint.com wants to open this application.

Always allow nasapoc.sharepoint.com to open links of this type in the associated app

Open Project | Cancel

Project

BROWSE | PROJECTS

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In Browser
In Browser for Editing
In Microsoft Project
In Microsoft Project for Editing

Navigate | Zoom | Data | Timeline | Share | Show/Hide | Project Type

Tasks
Resources
Reports
EDIT LINKS

Create a big picture view of your projects with Roadmap. Visit Project Home to get started on a new roadmap.

Today

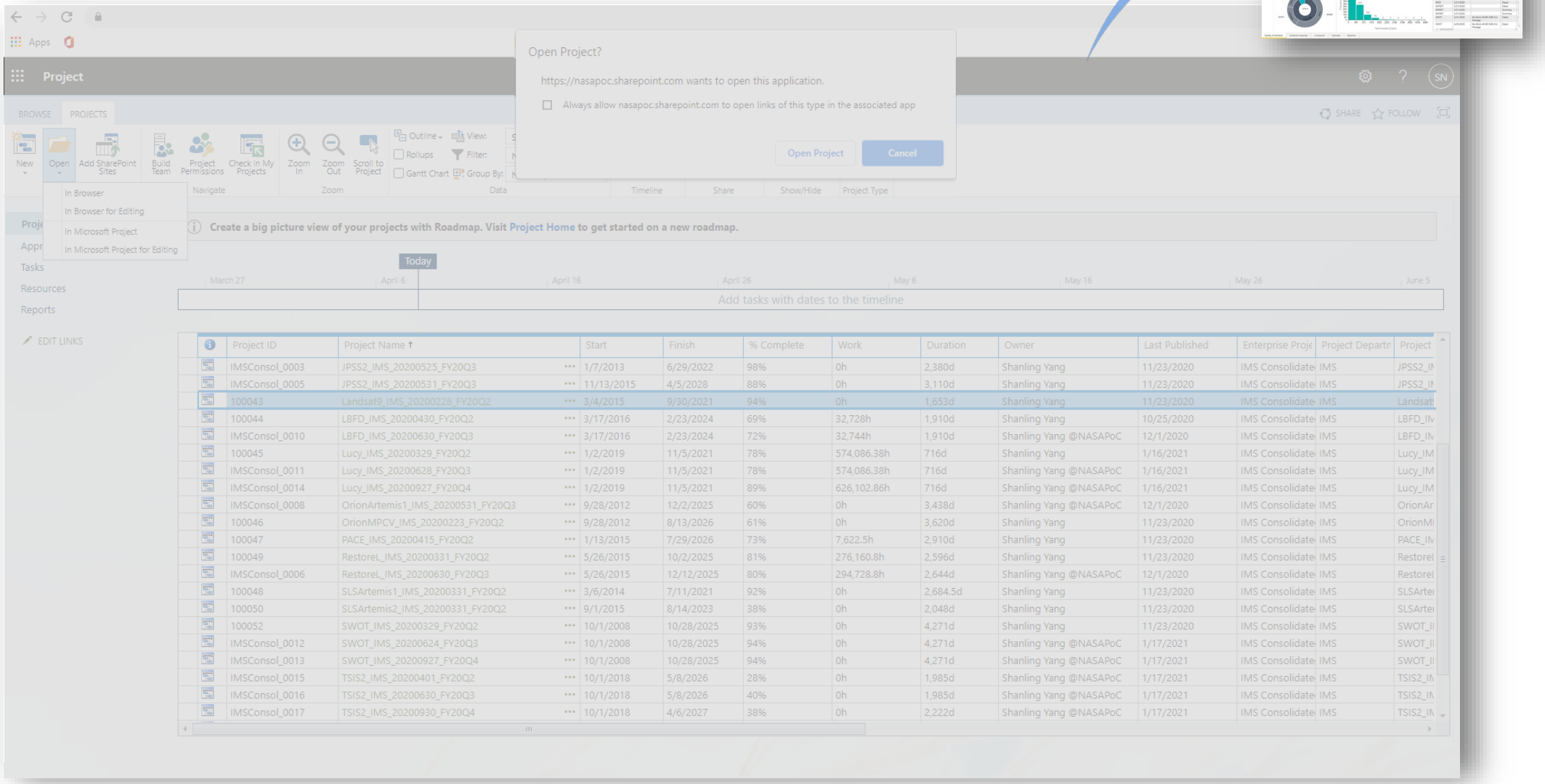
March 27 | April 6 | April 16 | April 26 | May 6 | May 16 | May 26 | June 5

Add tasks with dates to the timeline

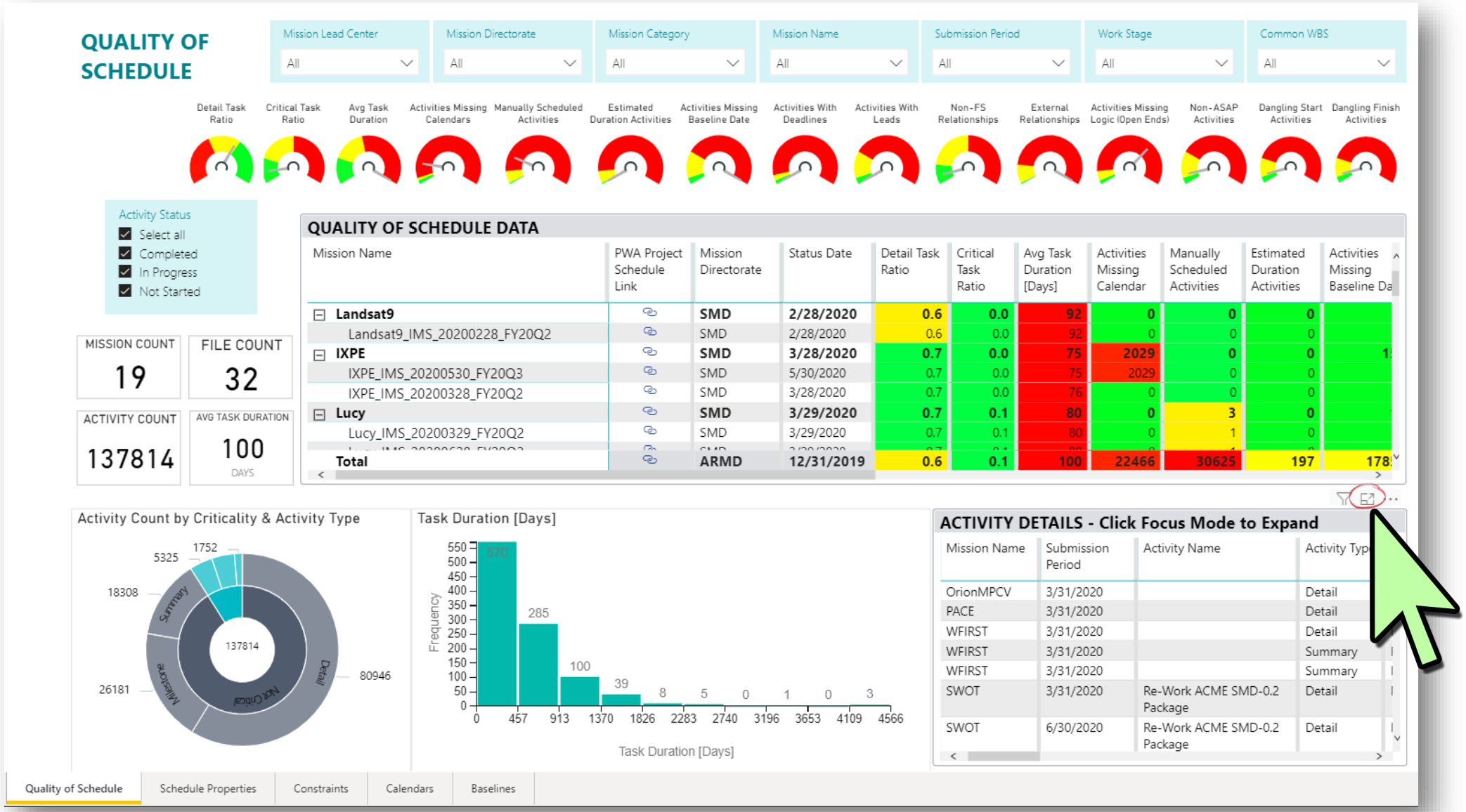
Project ID	Project Name	Start	Finish	% Complete	Work	Duration	Owner	Last Published	Enterprise Proje	Project Departn	Project
IMSConsol_0003	JPSS2_IMS_20200525_FY20Q3	1/7/2013	6/29/2022	98%	0h	2,380d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	JPSS2_IM
IMSConsol_0005	JPSS2_IMS_20200531_FY20Q3	11/13/2015	4/5/2028	88%	0h	3,110d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	JPSS2_IM
100043	Landsat9_IMS_20200228_FY20Q2	3/4/2015	9/30/2021	94%	0h	1,653d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	Landsat
100044	LBFD_IMS_20200430_FY20Q2	3/17/2016	2/23/2024	69%	32,728h	1,910d	Shanling Yang	10/25/2020	IMS Consolidate	IMS	LBFD_IM
IMSConsol_0010	LBFD_IMS_20200630_FY20Q3	3/17/2016	2/23/2024	72%	32,744h	1,910d	Shanling Yang @NASAPoC	12/1/2020	IMS Consolidate	IMS	LBFD_IM
100045	Lucy_IMS_20200329_FY20Q2	1/2/2019	11/5/2021	78%	574,086.38h	716d	Shanling Yang	1/16/2021	IMS Consolidate	IMS	Lucy_IM
IMSConsol_0011	Lucy_IMS_20200628_FY20Q3	1/2/2019	11/5/2021	78%	574,086.38h	716d	Shanling Yang @NASAPoC	1/16/2021	IMS Consolidate	IMS	Lucy_IM
IMSConsol_0014	Lucy_IMS_20200927_FY20Q4	1/2/2019	11/5/2021	89%	626,102.86h	716d	Shanling Yang @NASAPoC	1/16/2021	IMS Consolidate	IMS	Lucy_IM
IMSConsol_0008	OrionArtemis1_IMS_20200531_FY20Q3	9/28/2012	12/2/2025	60%	0h	3,438d	Shanling Yang @NASAPoC	12/1/2020	IMS Consolidate	IMS	OrionAr
100046	OrionMPCV_IMS_20200223_FY20Q2	9/28/2012	8/13/2026	61%	0h	3,620d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	OrionMI
100047	PACE_IMS_20200415_FY20Q2	1/13/2015	7/29/2026	73%	7,622.5h	2,910d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	PACE_IM
100049	RestoreL_IMS_20200331_FY20Q2	5/26/2015	10/2/2025	81%	276,160.8h	2,596d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	Restorel
IMSConsol_0006	RestoreL_IMS_20200630_FY20Q3	5/26/2015	12/12/2025	80%	294,728.8h	2,644d	Shanling Yang @NASAPoC	12/1/2020	IMS Consolidate	IMS	Restorel
100048	SLSArtemis1_IMS_20200331_FY20Q2	3/6/2014	7/11/2021	92%	0h	2,684.5d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SLSArte
100050	SLSArtemis2_IMS_20200331_FY20Q2	9/1/2015	8/14/2023	38%	0h	2,048d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SLSArte
100052	SWOT_IMS_20200329_FY20Q2	10/1/2008	10/28/2025	93%	0h	4,271d	Shanling Yang	11/23/2020	IMS Consolidate	IMS	SWOT_I
IMSConsol_0012	SWOT_IMS_20200624_FY20Q3	10/1/2008	10/28/2025	94%	0h	4,271d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	SWOT_I
IMSConsol_0013	SWOT_IMS_20200927_FY20Q4	10/1/2008	10/28/2025	94%	0h	4,271d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	SWOT_I
IMSConsol_0015	TSIS2_IMS_20200401_FY20Q2	10/1/2018	5/8/2026	28%	0h	1,985d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN
IMSConsol_0016	TSIS2_IMS_20200630_FY20Q3	10/1/2018	5/8/2026	40%	0h	1,985d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN
IMSConsol_0017	TSIS2_IMS_20200930_FY20Q4	10/1/2018	4/6/2027	38%	0h	2,222d	Shanling Yang @NASAPoC	1/17/2021	IMS Consolidate	IMS	TSIS2_IN

✓ Desktop Project will automatically launch and open the selected project file.

Back to TEAMS…

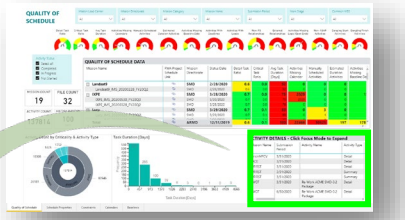


Schedule Management || Quality || **Quality of Schedule**



Additional details and information can be viewed by expanding graphics.

Additional Details Are Only Clicks Away



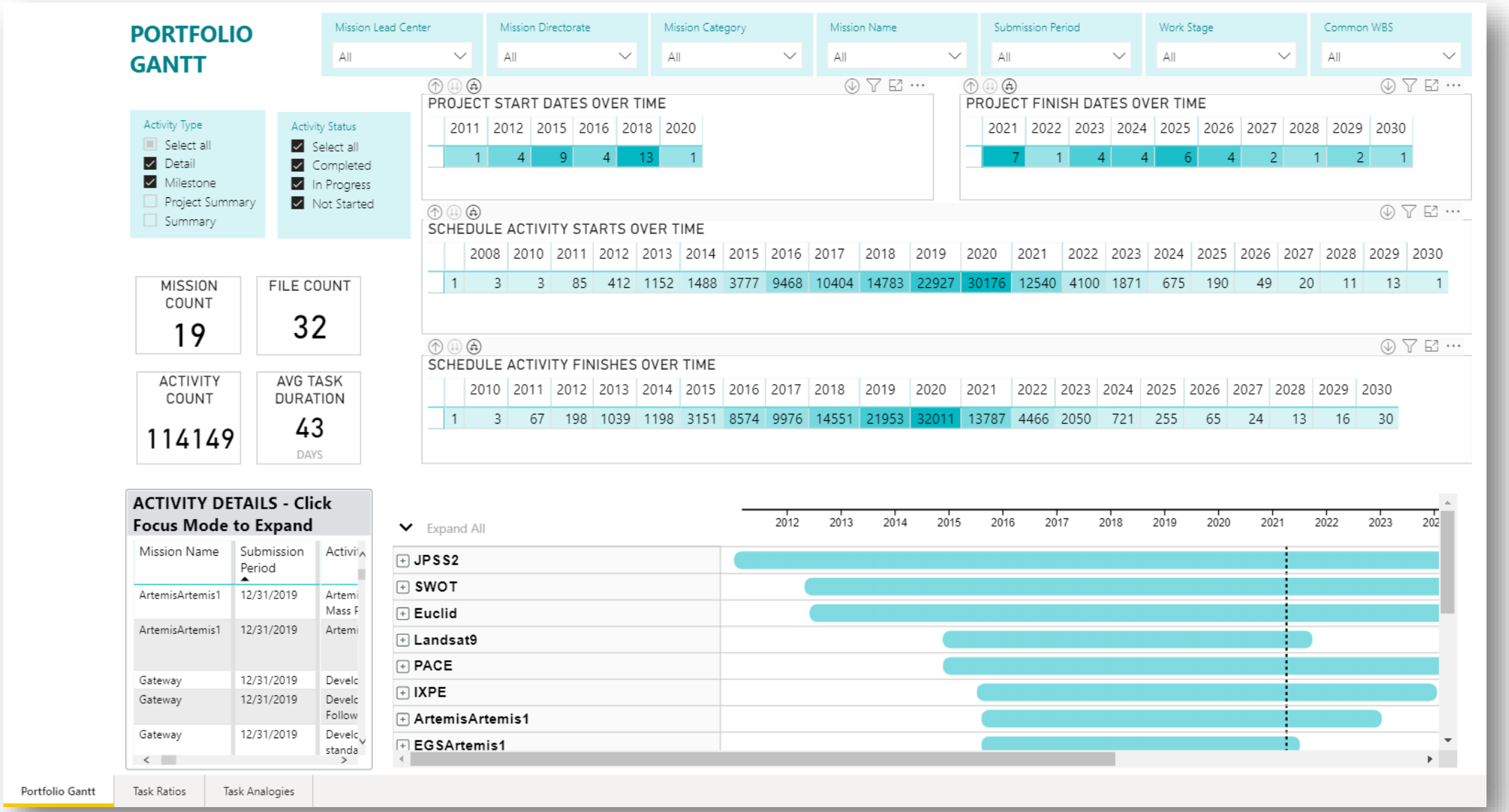
Back to report | ACTIVITY DETAILS – CLICK FOCUS MODE TO EXPAND

LAST REFRESH:4/5/2021, 3:51:45 PM

Mission Name	Submission Period	Activity Name	Activity Type	Task Calendar Name	Common WBS	Start Date	Finish Date	Task Duration [Days]	Total Slack [Days]	Criticality	Task Percent Completed	Constraint Type	Constraint Date	Deadline Date	External Relationships	Manually Scheduled	Merge Type	Predecessc
OrionMPCV	3/31/2020		Detail					0	0	Not Critical	0					0	00 None	
PACE	3/31/2020		Detail	None		1/13/2015	1/14/2015	1	0	Critical	0	As Soon As Possible				0	00 None	
WFIRST	3/31/2020		Detail	None	7120.5-06.0 Flight System	12/9/2019	2/21/2020	55	0	Not Critical	100	As Soon As Possible				1	00 None	
WFIRST	3/31/2020		Summary	None	7120.5-06.0 Flight System	12/9/2019	3/26/2020	79	293	Not Critical	44	As Soon As Possible				1	00 None	
WFIRST	3/31/2020		Summary	None	7120.5-06.0 Flight System	6/13/2019	2/18/2020	179	1,478	Not Critical	48	As Soon As Possible				1	00 None	
SWOT	3/31/2020	Re-Work ACME SMD-0.2 Package	Detail	None	7120.5-05.0 Payload	7/9/2018	11/6/2018	86	0	Not Critical	100	As Soon As Possible			0	0	00 None	
SWOT	6/30/2020	Re-Work ACME SMD-0.2 Package	Detail	None	7120.5-05.0 Payload	7/9/2018	11/6/2018	86	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	9/30/2020	Re-Work ACME SMD-0.2 Package	Detail	None	7120.5-05.0 Payload	7/9/2018	11/6/2018	86	0	Not Critical	100	As Soon As Possible				0	00 None	
Landsat9	3/31/2020	DPAS Dev	Summary	None	7120.5-09.0 Ground	12/2/2016	4/27/2020	853	44	Not Critical	99	As Soon As Possible				0	00 None	
Landsat9	3/31/2020	GNE Dev	Summary	None	7120.5-09.0 Ground	12/2/2016	9/22/2020	956	114	Not Critical	86	As Soon As Possible				0	00 None	
SWOT	3/31/2020	Coupon Testing (EM2 KDES Controller PDU)	Milestone	None	7120.5-05.0 Payload	5/19/2016	5/19/2016	0	0	Not Critical	100	As Soon As Possible			0	0	01 Single	
SWOT	6/30/2020	Coupon Testing (EM2 KDES Controller PDU)	Milestone	None	7120.5-05.0 Payload	5/19/2016	5/19/2016	0	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	9/30/2020	Coupon Testing (EM2 KDES Controller PDU)	Milestone	None	7120.5-05.0 Payload	5/19/2016	5/19/2016	0	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	3/31/2020	Develop reduced AMR thermal model for payload	Detail	None	7120.5-05.0 Payload	3/28/2016	5/27/2016	45	0	Not Critical	100	As Soon As Possible			0	0	01 Single	
SWOT	6/30/2020	Develop reduced AMR thermal model for payload	Detail	None	7120.5-05.0 Payload	3/28/2016	5/27/2016	45	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	9/30/2020	Develop reduced AMR thermal model for payload	Detail	None	7120.5-05.0 Payload	3/28/2016	5/27/2016	45	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	3/31/2020	Electronics Fabrication Prep (EM2 KDES Controller PDUs)	Summary	None	7120.5-05.0 Payload	4/29/2016	5/19/2016	15	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	6/30/2020	Electronics Fabrication Prep (EM2 KDES Controller PDUs)	Summary	None	7120.5-05.0 Payload	4/29/2016	5/19/2016	15	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	9/30/2020	Electronics Fabrication Prep (EM2 KDES Controller PDUs)	Summary	None	7120.5-05.0 Payload	4/29/2016	5/19/2016	15	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	3/31/2020	Initiate HBBs (EM2 KDES Controller PDU)	Detail	None	7120.5-05.0 Payload	5/6/2016	5/19/2016	10	0	Not Critical	100	As Soon As Possible			0	0	01 Single	
SWOT	6/30/2020	Initiate HBBs (EM2 KDES Controller PDU)	Detail	None	7120.5-05.0 Payload	5/6/2016	5/19/2016	10	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	9/30/2020	Initiate HBBs (EM2 KDES Controller PDU)	Detail	None	7120.5-05.0 Payload	5/6/2016	5/19/2016	10	0	Not Critical	100	As Soon As Possible				0	00 None	
SWOT	3/31/2020	Procure PWB (EM2 KDES Controller PDU)	Detail	None	7120.5-05.0 Payload	5/6/2016	5/19/2016	10	0	Not Critical	100	As Soon As Possible			0	0	01 Single	

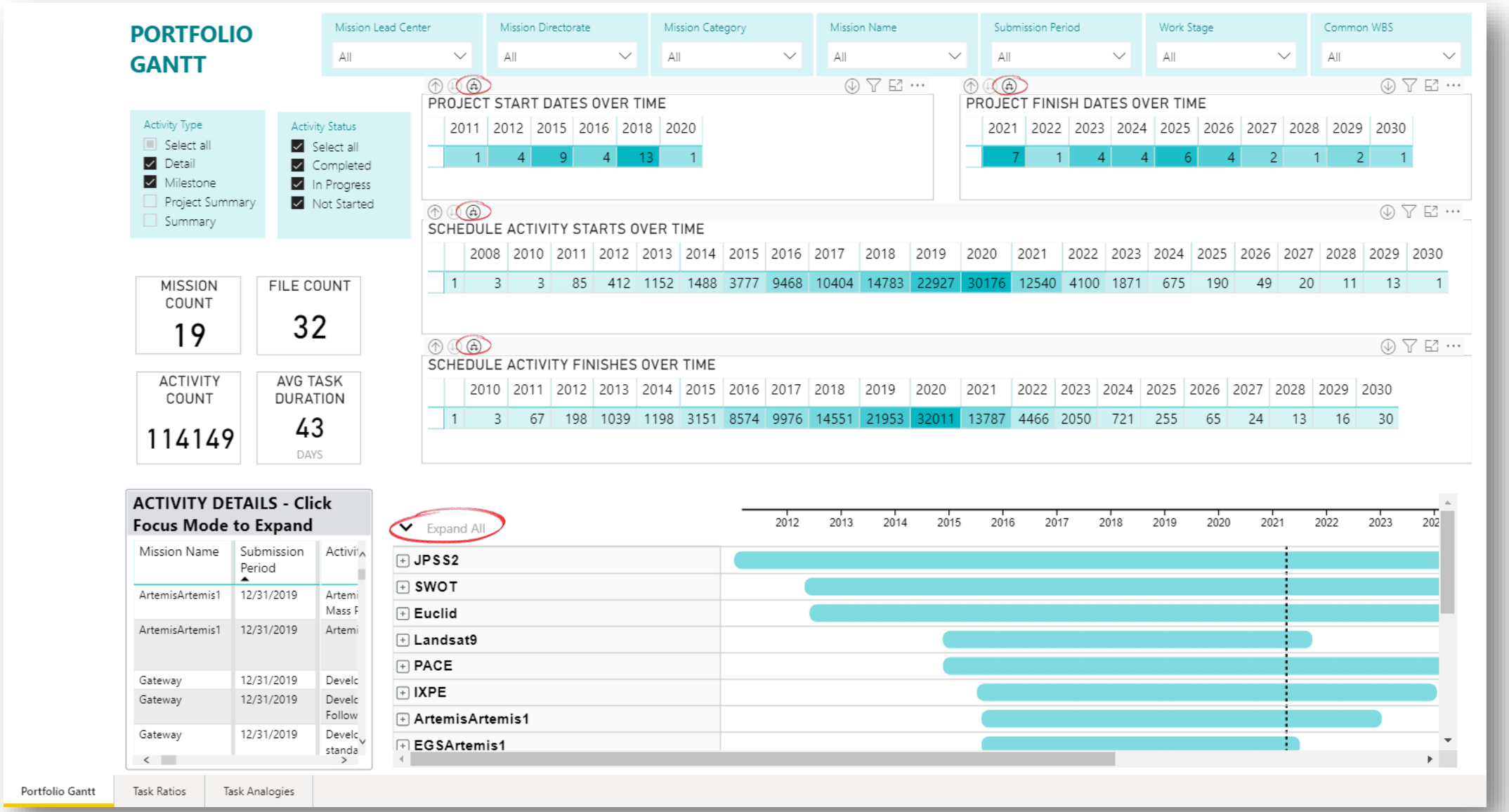
✓ Limitless data can be contained within a single page's graphics.

Schedule Management || Metrics || **Portfolio Gantt**



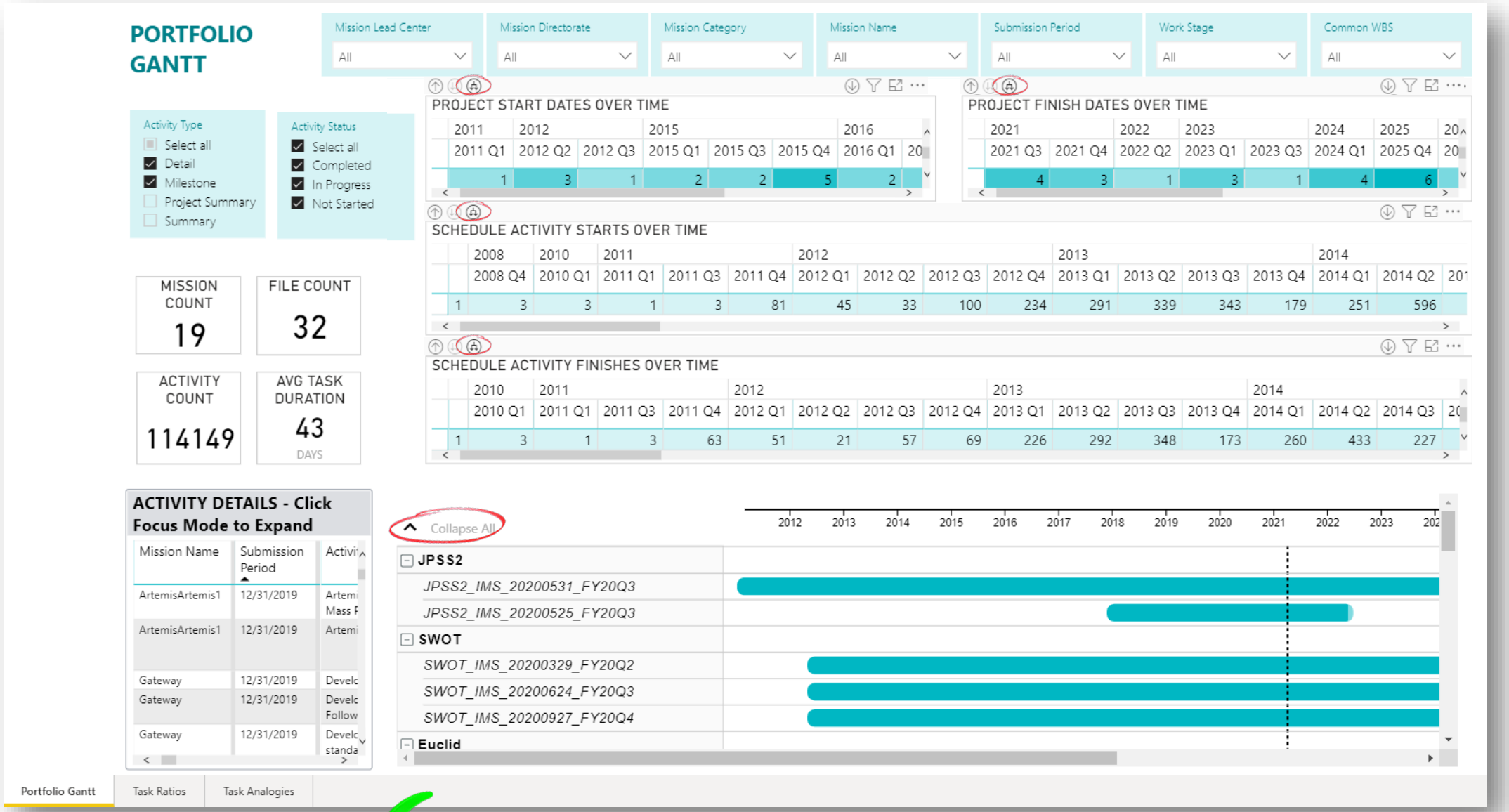
Gantt views can also be created in the TEAMS reports.

Schedule Management || Metrics || **Portfolio Gantt**



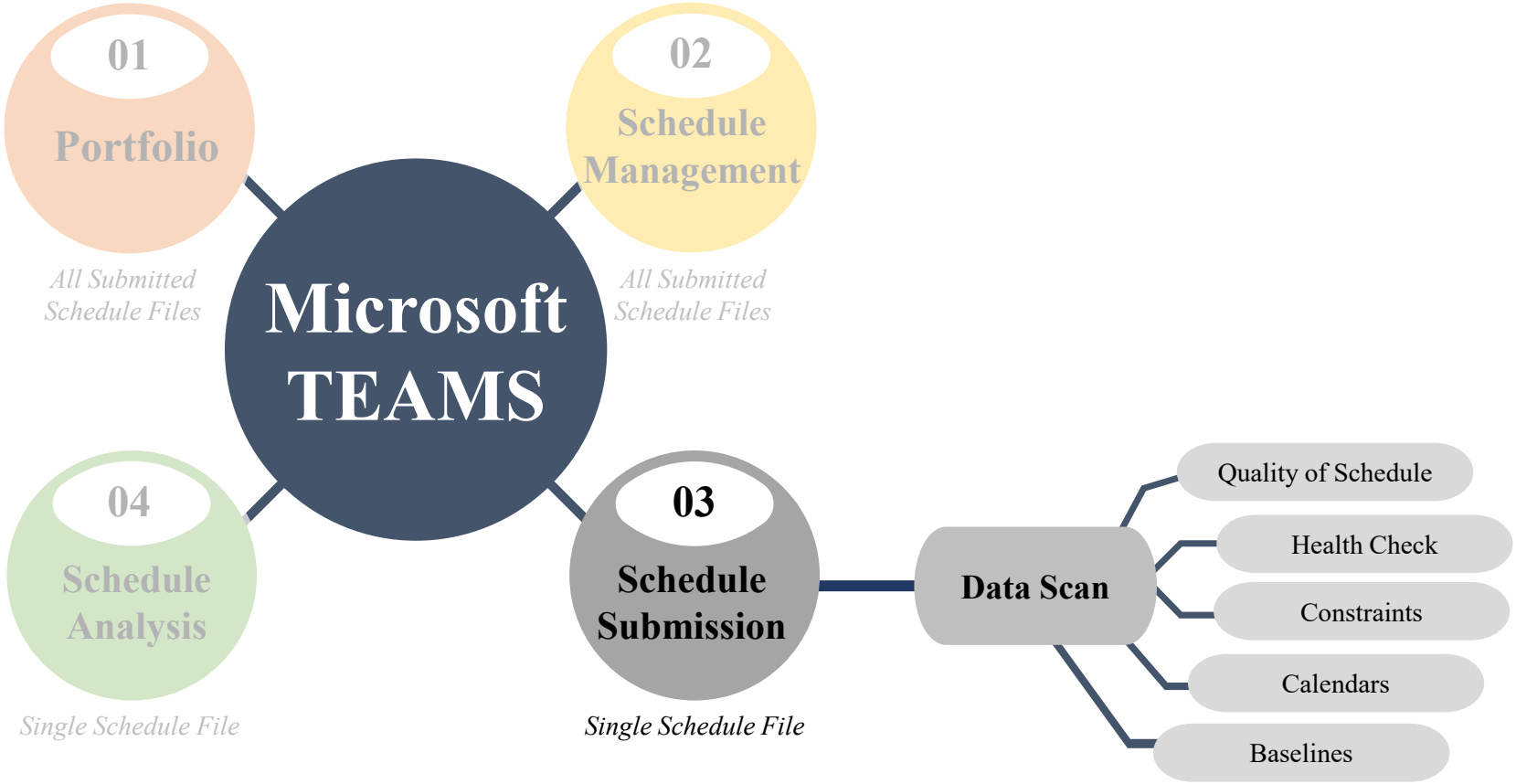
Graphics can easily be expanded to show lower level details.

Schedule Management || Metrics || **Portfolio Gantt**

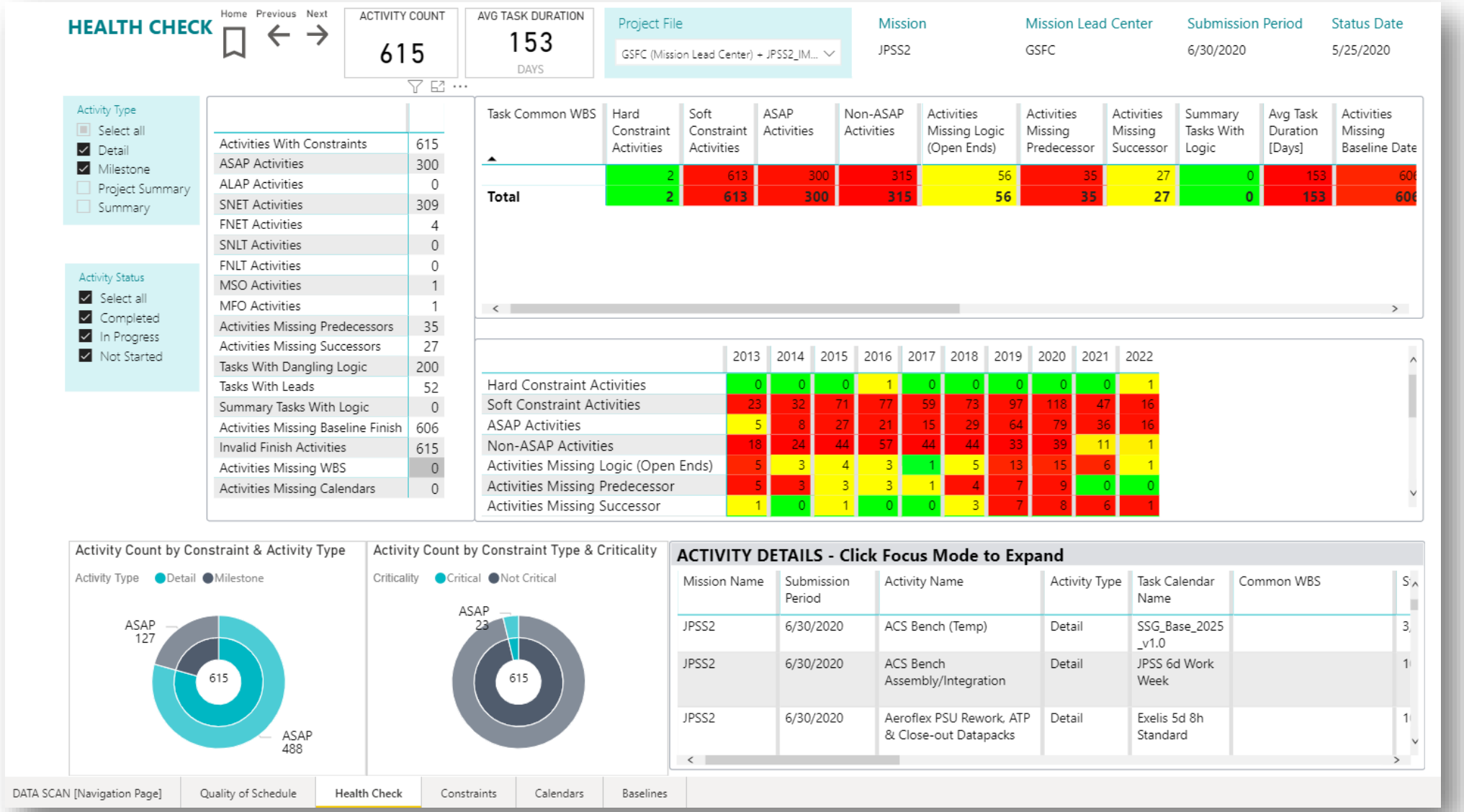


Multiple levels of information can be communicated.

Schedule Submission Channel

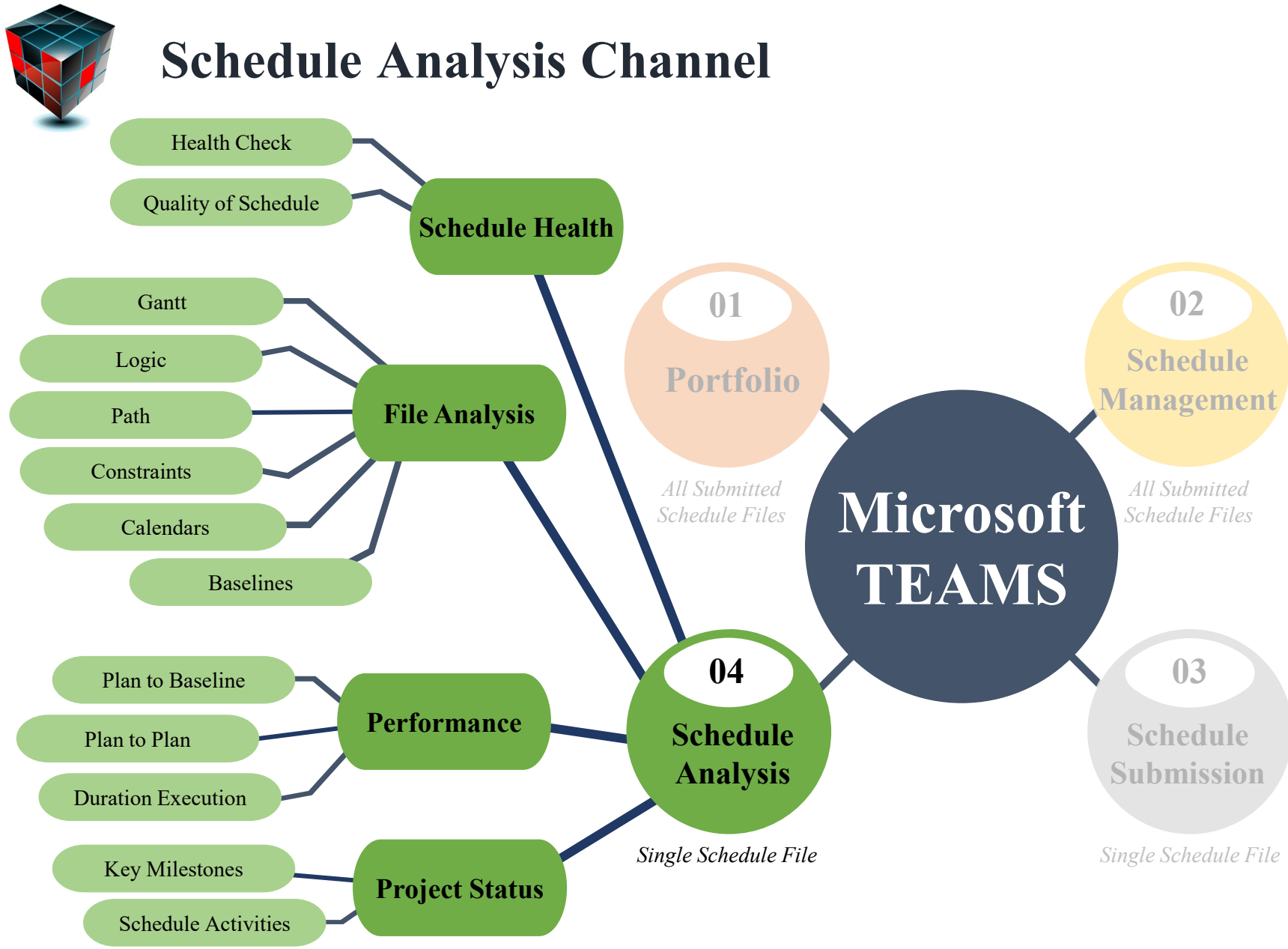


Schedule Submission || Data Scan || **Health Check**

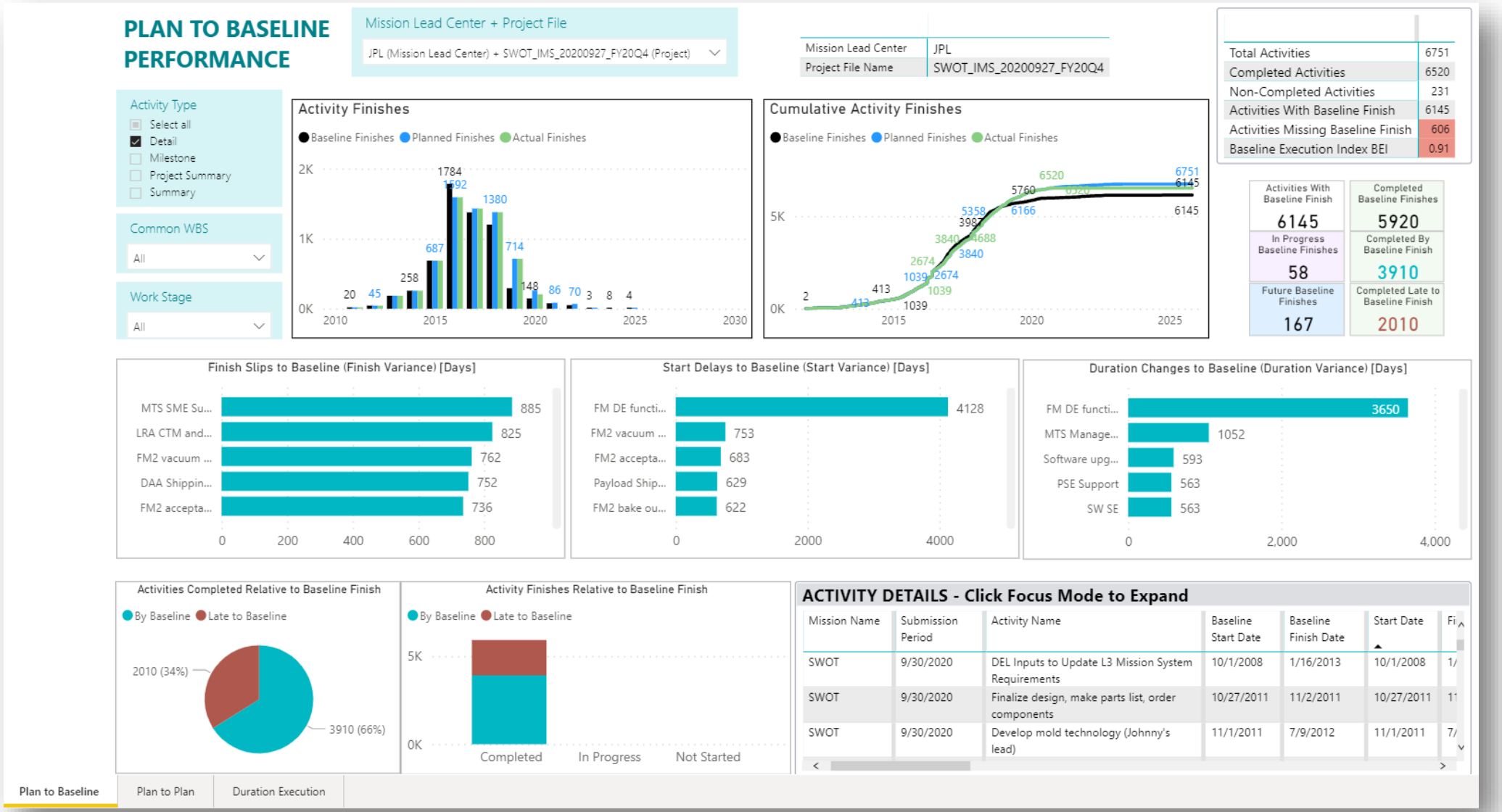


A Health Check report provides a view into a schedule's build up and components.

Schedule Analysis Channel

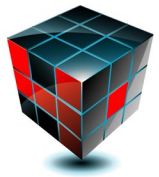


Schedule Analysis || Performance || **Plan to Baseline Performance**



A Plan to Baseline Performance report details a schedule's current performance compared to its baseline.

Schedule Analysis || Performance || **Plan to Baseline Performance**



PLAN TO BASELINE PERFORMANCE

Mission Lead Center + Project File

JPL (Mission Lead Center) + SWOT_IMS_20200927_FY20Q4 (Project)

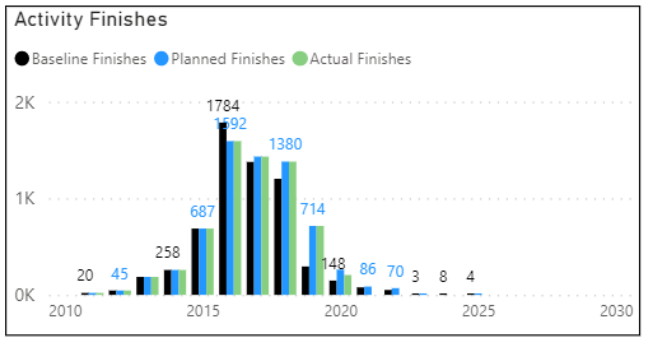
Mission Lead Center	JPL
Project File Name	SWOT_IMS_20200927_FY20Q4

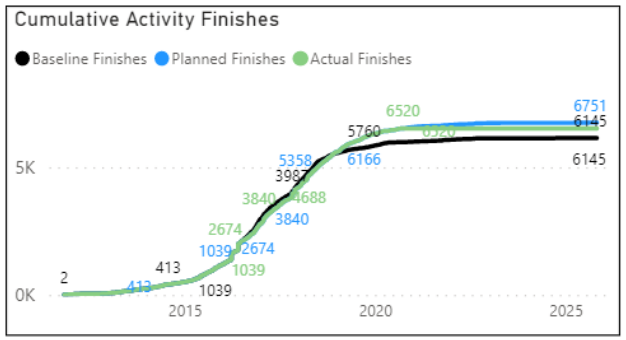
Total Activities	6751
Completed Activities	6520
Non-Completed Activities	231
Activities With Baseline Finish	6145
Activities Missing Baseline Finish	606
Baseline Execution Index BEI	0.91

Activity Type: Select all, Detail, Milestone, Project Summary, Summary

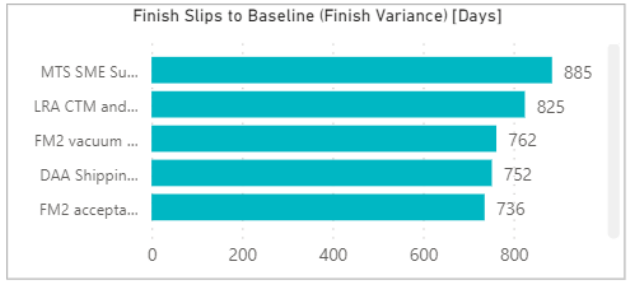
Common WBS: All

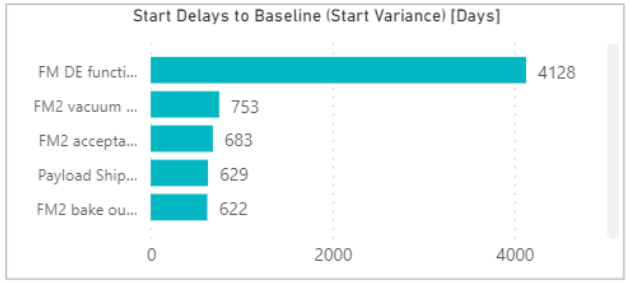
Work Stage: All

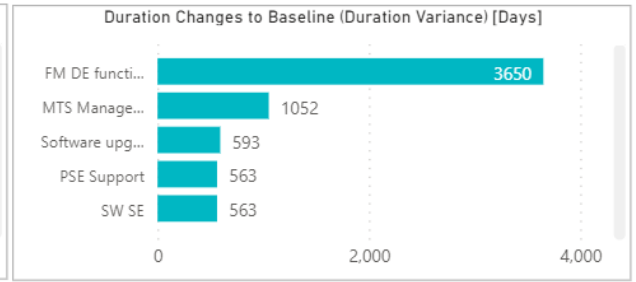


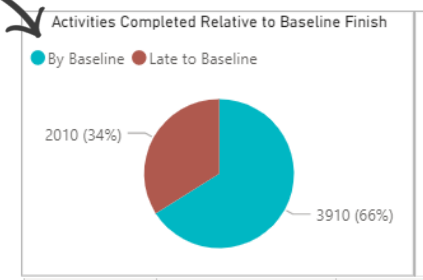


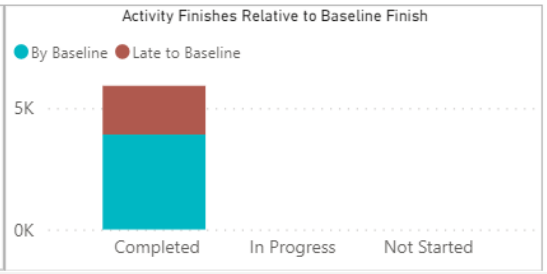
Activities With Baseline Finish	6145
Completed Baseline Finishes	5920
In Progress Baseline Finishes	58
Completed By Baseline Finish	3910
Future Baseline Finishes	167
Completed Late to Baseline Finish	2010











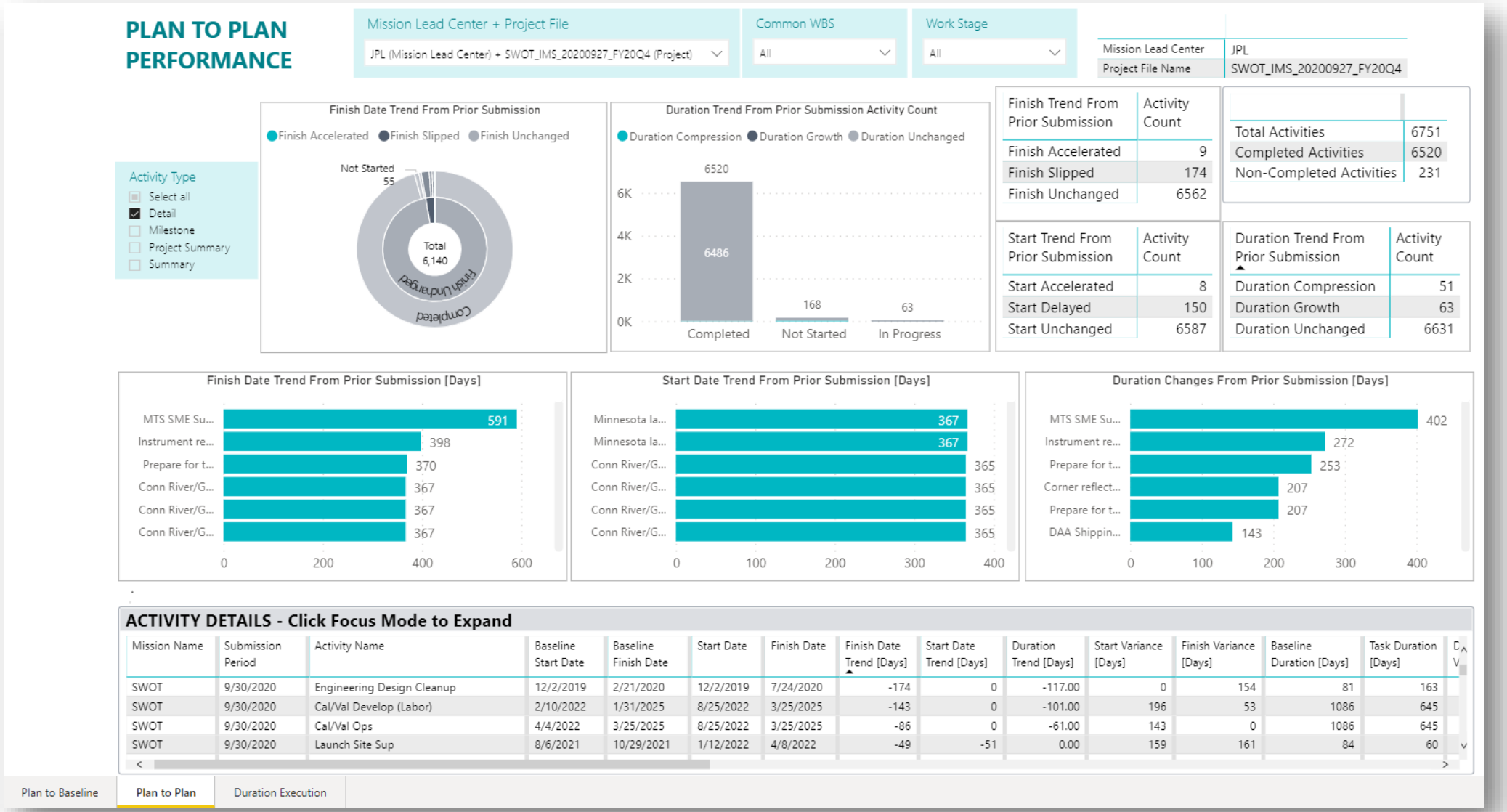
ACTIVITY DETAILS - Click Focus Mode to Expand

Mission Name	Submission Period	Activity Name	Baseline Start Date	Baseline Finish Date	Start Date	Fi
SWOT	9/30/2020	DEL Inputs to Update L3 Mission System Requirements	10/1/2008	1/16/2013	10/1/2008	1/
SWOT	9/30/2020	Finalize design, make parts list, order components	10/27/2011	11/2/2011	10/27/2011	11
SWOT	9/30/2020	Develop mold technology (Johnny's lead)	11/1/2011	7/9/2012	11/1/2011	7/

Plan to Baseline | Plan to Plan | Duration Execution

Important performance information can be efficiently communicated with various graphics.

Schedule Analysis || Performance || **Plan to Plan Performance**



A Plan to Plan Performance report shows a project schedule's performance trends across multiple submission periods.

NASA Schedule Database: Major Accomplishments

- Commercial tenant setup and configuration (and reconfigurations)
  - 4 months to achieve initial capability demonstration (Oct 2020)
- Processing of submitted schedule files from 4 submission periods in 2020
- Cohesive implementation of MS TEAMS, Power BI, web browser and Project Online (PWA)
- Utilization of FK&A software for efficient data extraction, modeling, and reporting
- Thorough metric survey and creation of initial consolidated list of pertinent metrics and benchmarks
- Documentation of "Lessons Learned"
  - Actual schedule files, setup of the tenant, relevant metrics and thresholds
- Demonstration of system responsiveness and ease of updating
  - 6 new files (3 new missions, 3 existing missions) were added to system and available for analysis within 24 hours

NASA Schedule Database: The Initial Tool Has Been Released

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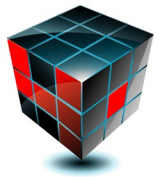

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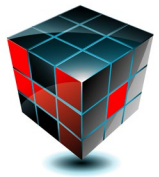

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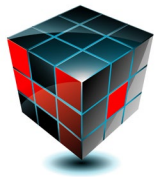

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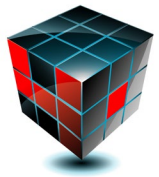

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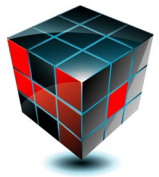

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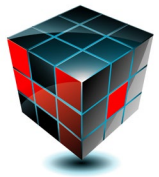

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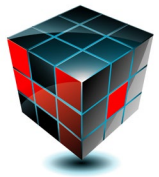
- ☑ All pieces of the architecture are integrated



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- ☑ All pieces of the architecture are integrated
- ☐ Move schedule database and analytics tool inside of the NASA firewall

NASA Schedule Database: A Sandbox For Further Development

Next Steps and Goals:

- Involve other NASA centers to take advantage of the initial schedule database sandbox.
- Obtain feedback from more participants to further develop and mature the tool.

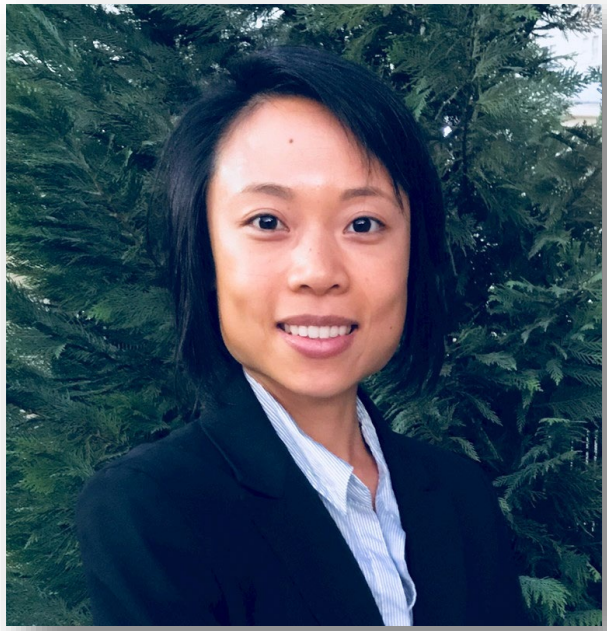
To learn more, please contact the following:

- **Charles Hunt**, APARC Branch Manager, charles.d.hunt@nasa.gov
- **Michele King**, SCoPE Lead, michele.t.king@nasa.gov

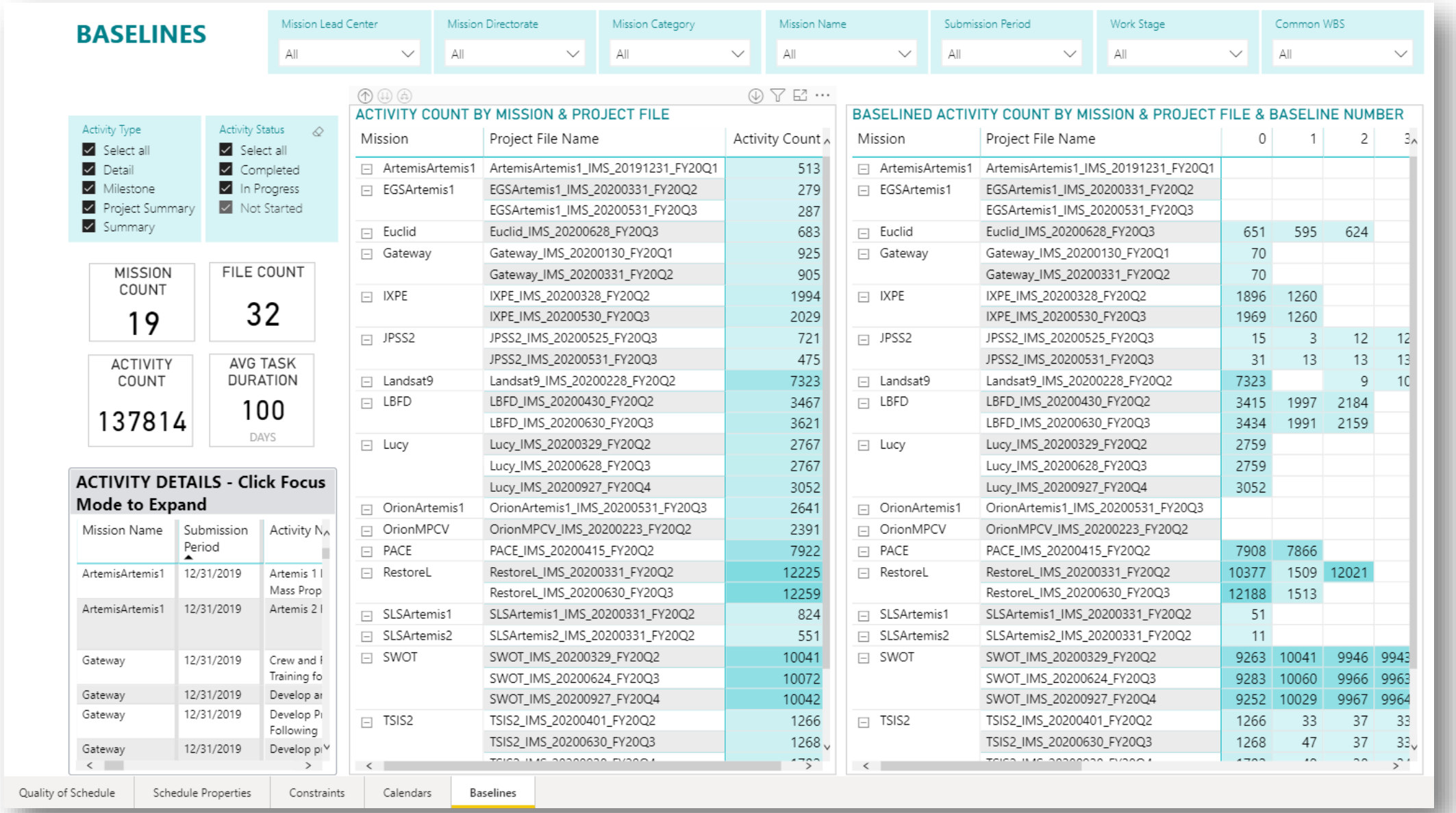
Back Up

Presenter Biography: Shanling Yang, Ph.D.

Shanling Yang obtained her B.S., M.S., and Ph.D. in Aerospace Engineering from the University of Southern California with a research emphasis in low-Reynolds number aerodynamics. Dr. Yang has published numerous journal articles and conference proceedings and has spoken at multiple conferences and international universities. She has several years of Program Management experience, managing programs for various clients including NASA, DARPA, SOCOM, and AFRL. She is currently a Senior Consultant with 4-D Risk Corporation, providing expertise in cost and schedule analysis and risk management.



Schedule Management || Quality || **Baselines**



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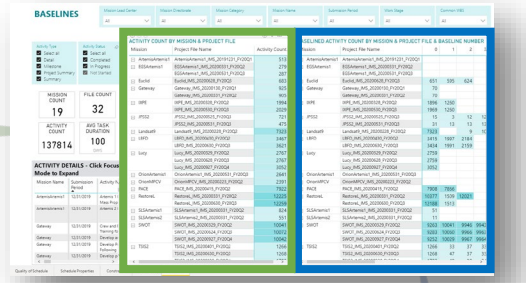

Number of Activities for Baseline 0 (Default)

Back to report | ACTIVITY COUNT BY MISSION & PROJECT FILE

Mission	Project File Name	Activity Count
ArtemisArtemis1	ArtemisArtemis1_IMS_20191231_FY20Q1	513
EGSArtemis1	EGSArtemis1_IMS_20200331_FY20Q2	279
	EGSArtemis1_IMS_20200531_FY20Q3	287
Euclid	Euclid_IMS_20200628_FY20Q3	683
Gateway	Gateway_IMS_20200130_FY20Q1	925
	Gateway_IMS_20200331_FY20Q2	905
IXPE	IXPE_IMS_20200328_FY20Q2	1994
	IXPE_IMS_20200530_FY20Q3	2029
JPSS2	JPSS2_IMS_20200525_FY20Q3	721
	JPSS2_IMS_20200531_FY20Q3	475
Landsat9	Landsat9_IMS_20200228_FY20Q2	7323
LBFD	LBFD_IMS_20200430_FY20Q2	3467
	LBFD_IMS_20200630_FY20Q3	3621
Lucy	Lucy_IMS_20200329_FY20Q2	2767
	Lucy_IMS_20200628_FY20Q3	2767
	Lucy_IMS_20200927_FY20Q4	3052
OrionArtemis1	OrionArtemis1_IMS_20200531_FY20Q3	2641
OrionMPCV	OrionMPCV_IMS_20200223_FY20Q2	2391
PACE	PACE_IMS_20200415_FY20Q2	7922
RestoreL	RestoreL_IMS_20200331_FY20Q2	12225
	RestoreL_IMS_20200630_FY20Q3	12259
SLSArtemis1	SLSArtemis1_IMS_20200331_FY20Q2	824
SLSArtemis2	SLSArtemis2_IMS_20200331_FY20Q2	551
SWOT	SWOT_IMS_20200329_FY20Q2	10041
	SWOT_IMS_20200624_FY20Q3	10072
	SWOT_IMS_20200927_FY20Q4	10042
TSIS2	TSIS2_IMS_20200401_FY20Q2	1266
	TSIS2_IMS_20200630_FY20Q3	1268
	TSIS2_IMS_20200930_FY20Q4	1782
WFIRST	WFIRST_IMS_20200331_FY20Q2	30573
X57	X57_IMS_20200403_FY20Q2	1066
	X57_IMS_20200702_FY20Q3	1083

Number of Baselined Activities For Each Project Baseline

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Mission	Project File Name	0	1	2	3	4	5	6	7	9	10	Total
ArtemisArtemis1	ArtemisArtemis1_IMS_20191231_FY20Q1											
EGSArtemis1	EGSArtemis1_IMS_20200331_FY20Q2											
	EGSArtemis1_IMS_20200531_FY20Q3											
Euclid	Euclid_IMS_20200628_FY20Q3	651	595	624								1870
Gateway	Gateway_IMS_20200130_FY20Q1	70										70
	Gateway_IMS_20200331_FY20Q2	70										70
IXPE	IXPE_IMS_20200328_FY20Q2	1896	1260									3156
	IXPE_IMS_20200530_FY20Q3	1969	1260									3229
JPSS2	JPSS2_IMS_20200525_FY20Q3	15	3	12	12	3						45
	JPSS2_IMS_20200531_FY20Q3	31	13	13	13	13						83
Landsat9	Landsat9_IMS_20200228_FY20Q2	7323		9	10	17					7016	14375
LBFD	LBFD_IMS_20200430_FY20Q2	3415	1997	2184								7596
	LBFD_IMS_20200630_FY20Q3	3434	1991	2159								7584
Lucy	Lucy_IMS_20200329_FY20Q2	2759										2759
	Lucy_IMS_20200628_FY20Q3	2759										2759
	Lucy_IMS_20200927_FY20Q4	3052										3052
OrionArtemis1	OrionArtemis1_IMS_20200531_FY20Q3											
OrionMPCV	OrionMPCV_IMS_20200223_FY20Q2											
PACE	PACE_IMS_20200415_FY20Q2	7908	7866								2037	17811
RestoreL	RestoreL_IMS_20200331_FY20Q2	10377	1509	12021							4664	28571
	RestoreL_IMS_20200630_FY20Q3	12188	1513								4421	18122
SLSArtemis1	SLSArtemis1_IMS_20200331_FY20Q2	51								9		60
SLSArtemis2	SLSArtemis2_IMS_20200331_FY20Q2	11										11
SWOT	SWOT_IMS_20200329_FY20Q2	9263	10041	9946	9943	9943	9915	88	9556		9453	78148
	SWOT_IMS_20200624_FY20Q3	9283	10060	9966	9963	9963	9935	88	9576		9473	78307
	SWOT_IMS_20200927_FY20Q4	9252	10029	9967	9964	9964	9904	88	9577		9474	78219
TSIS2	TSIS2_IMS_20200401_FY20Q2	1266	33	37	33						1	1370
	TSIS2_IMS_20200630_FY20Q3	1268	47	37	33						1	1386
	TSIS2_IMS_20200930_FY20Q4	1782	49	38	34						1	1904
WFIRST	WFIRST_IMS_20200331_FY20Q2	29957										29957
X57	X57_IMS_20200403_FY20Q2		610	596							950	2156
	X57_IMS_20200702_FY20Q3		610	596							966	2172

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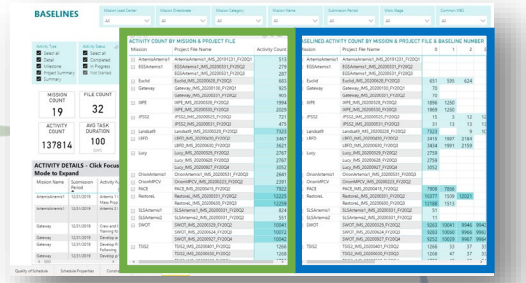
Schedule Management || Quality || **Baselines**



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