Interactive UI Design

By

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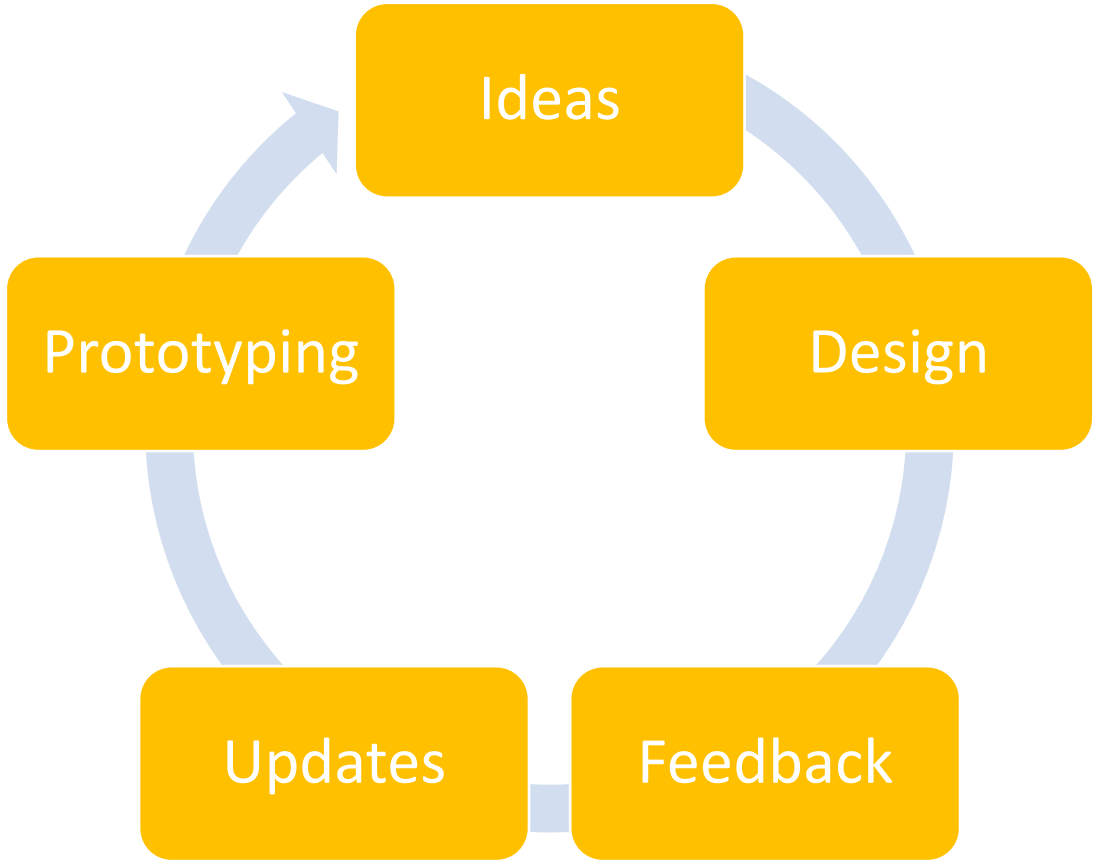
Introduction to Interactive UI Design

- Mainly Focuses on Creating the Interfaces that respond to user actions, and Provide the Dynamic and Engaging Experience.
- Enhanced User Experience.
- Bridges gaps across the platforms.
- Empowers engineers and scientists to interact intuitively with applications.



Principle of Interactive UI Design

- User-Centered Design - Prioritize the needs and preferences of users.
- Maintain Uniformity in design elements and interactions.

Key elements and Visual Hierarchy

- Visual Feedback, navigation paths, Organize, highlight important elements.

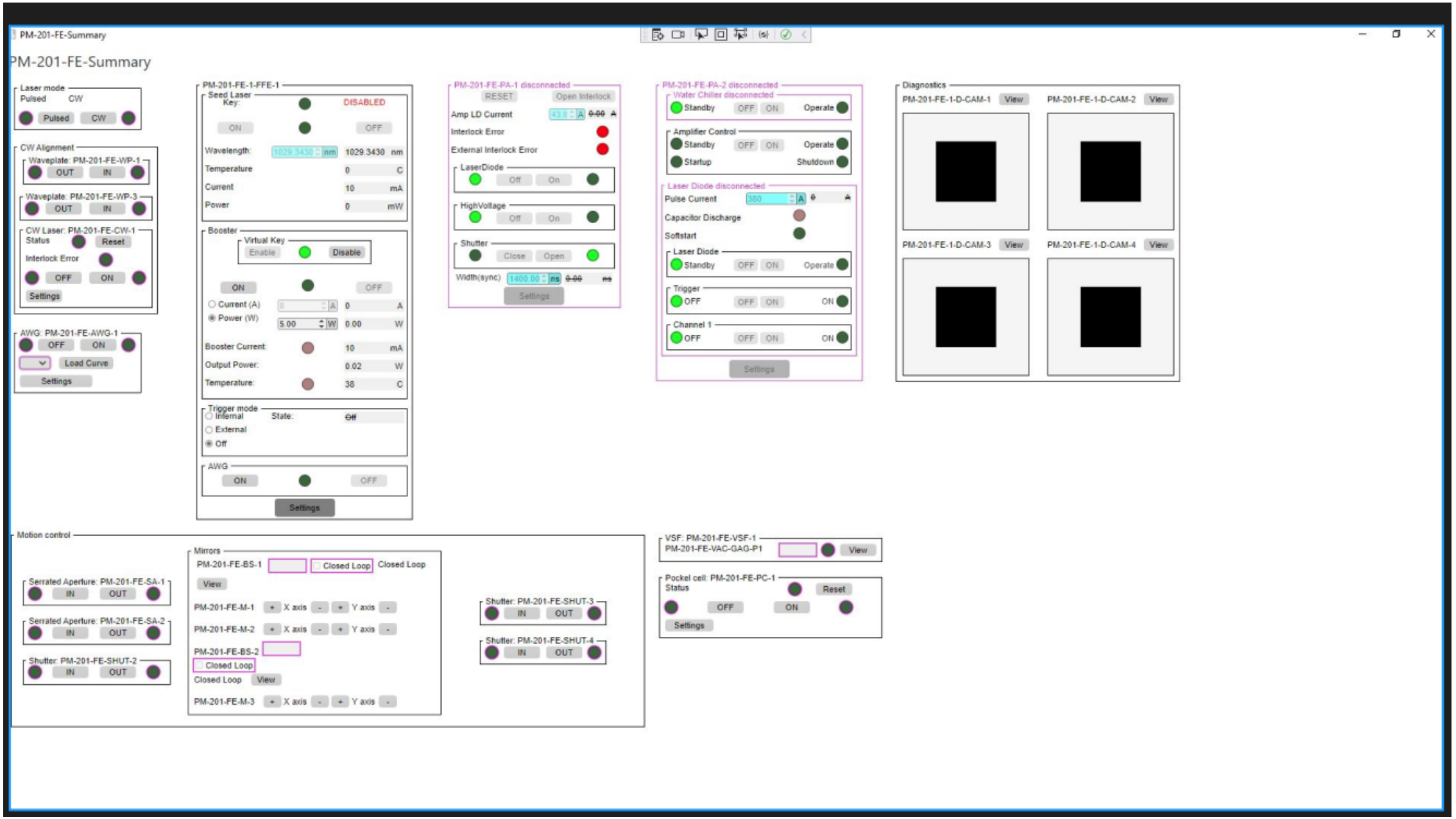
Usability and Accessibility

- Ease to use , WCAG, dynamic screen sizes and devices.

Prototyping

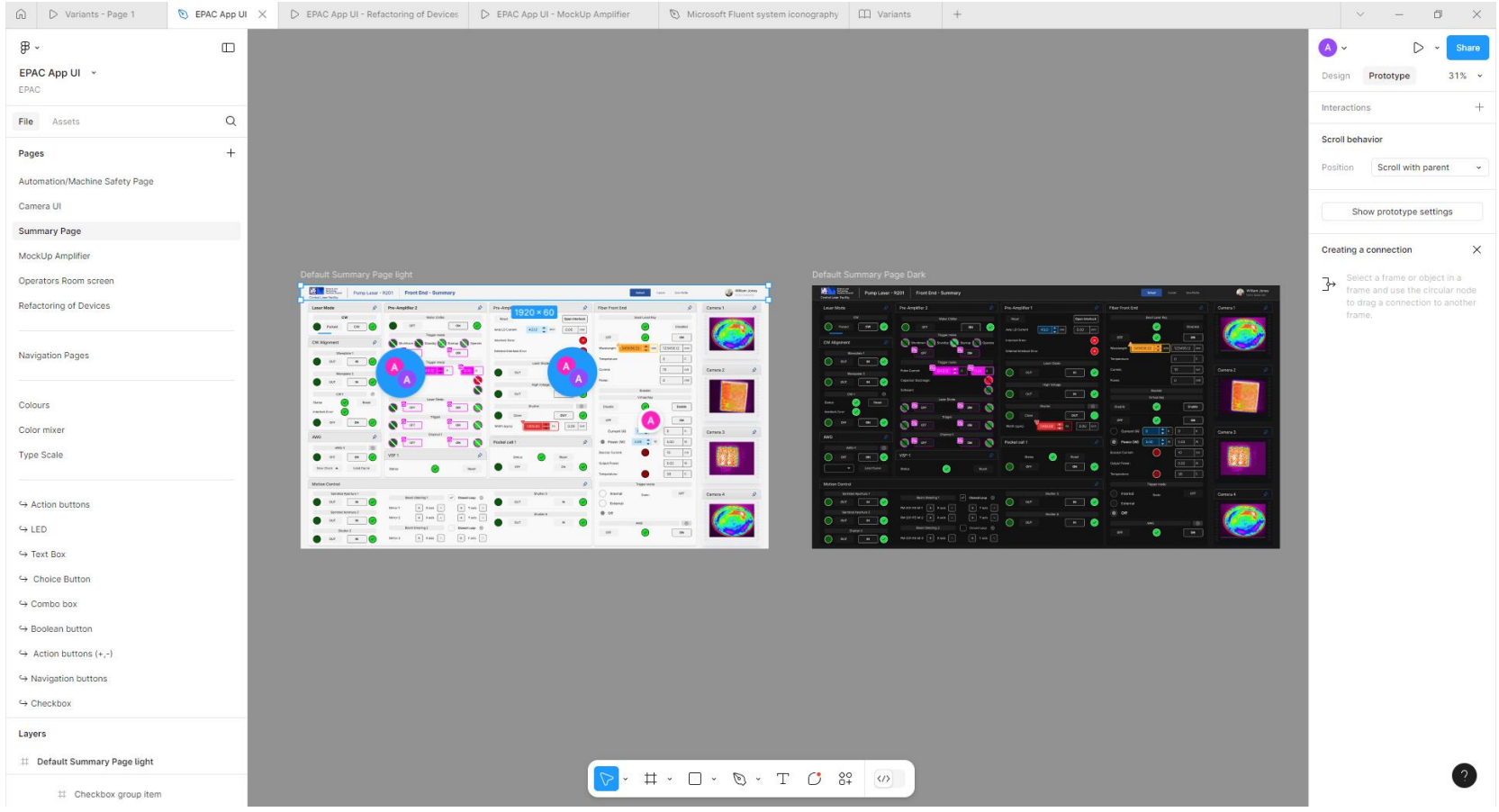
- Revised Model or Design from the stakeholders Feedback.

Our Work


PM-201-FE-Summary
PM-201-FE-Summary
Laser mode
Pulsed
CW
CW Alignment
Waveplate: PM-201-FE-WP-1
Waveplate: PM-201-FE-WP-3
CW Laser: PM-201-FE-CW-1
Status
Reset
Interlock Error
Settings
AWG: PM-201-FE-AWG-1
Load Curve
PM-201-FE-1-FFE-1
Seed Laser Key:
DISABLED
Wavelength:
1029.3430 nm
Temperature
Current
Power
Booster
Virtual Key
Enable
Disable
Booster Current:
Output Power:
Temperature:
Trigger mode
Internal
External
State:
AWG
PM-201-FE-PA-1 disconnected
RESET
Open Interlock
Amp LD Current
Interlock Error
External Interlock Error
LaserDiode
HighVoltage
Shutter
Close
Open
Width(sync)
PM-201-FE-PA-2 disconnected
Water Chiller disconnected
Standby
Operate
Amplifier Control
Startup
Shutdown
Laser Diode disconnected
Pulse Current
Capacitor Discharge
Softstart
Trigger
Channel 1
Diagnostics
PM-201-FE-1-D-CAM-1
PM-201-FE-1-D-CAM-2
PM-201-FE-1-D-CAM-3
PM-201-FE-1-D-CAM-4
View
Motion control
Serrated Aperture: PM-201-FE-SA-1
Serrated Aperture: PM-201-FE-SA-2
Shutter: PM-201-FE-SHUT-2
Mirrors
PM-201-FE-BS-1
Closed Loop
PM-201-FE-M-1
PM-201-FE-M-2
PM-201-FE-BS-2
PM-201-FE-M-3
X axis
Y axis
Shutter: PM-201-FE-SHUT-3
Shutter: PM-201-FE-SHUT-4
VSF: PM-201-FE-VSF-1
PM-201-FE-VAC-GAG-P1
Pockel cell: PM-201-FE-PC-1

The Role of Design Tools

- **FIGMA** is one of the Commonly used Design Tools While working on the interactive Designs.
- Figma is an cloud based tool and works with real-time collaboration.
- Rich in libraries for Pre Built Components.
- Integration with libraries like Fluent Icons and etc.,



Navigation Pane

Workspace

Properties Pane

Variants - Page 1

EPAC App

EPAC App UI

EPAC

File

Assets

Pages

Automation/Machine Safety Page

Camera UI

Summary Page

MockUp Amplifier

Operators Room screen

Refactoring of Devices

Navigation Pages

Colours

Color mixer

Type Scale

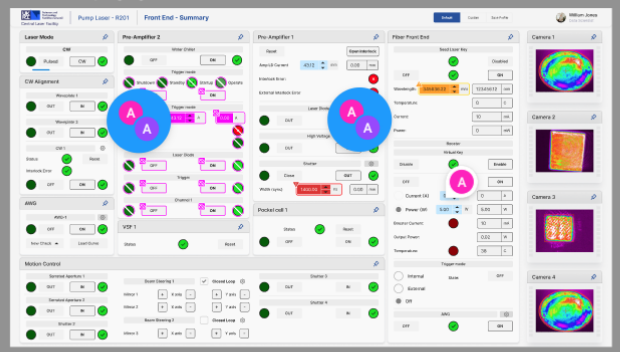
Action buttons

Layers

Default Summary Page Dark

Default Summary Page light

Default Summary Page light



Default Summary Page D

Share

Design

Prototype

31%

Frame

Position

X 1204

Y 72

0°

Layout

W 420

H 995

10

Clip content

Appearance

100%

8

Fill

FFFFFF

50 %

Stroke

EAECF0

100 %

Inside

1

Effects

Drop shadow

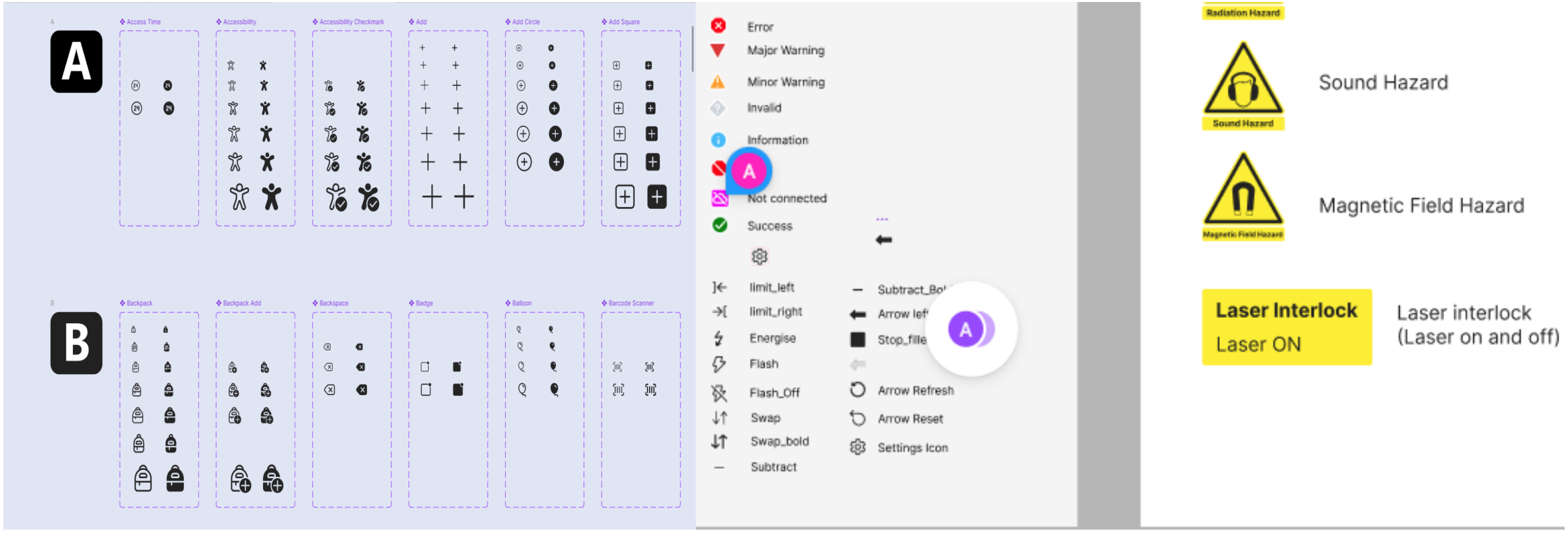
Selection colors

+19

Layout grid

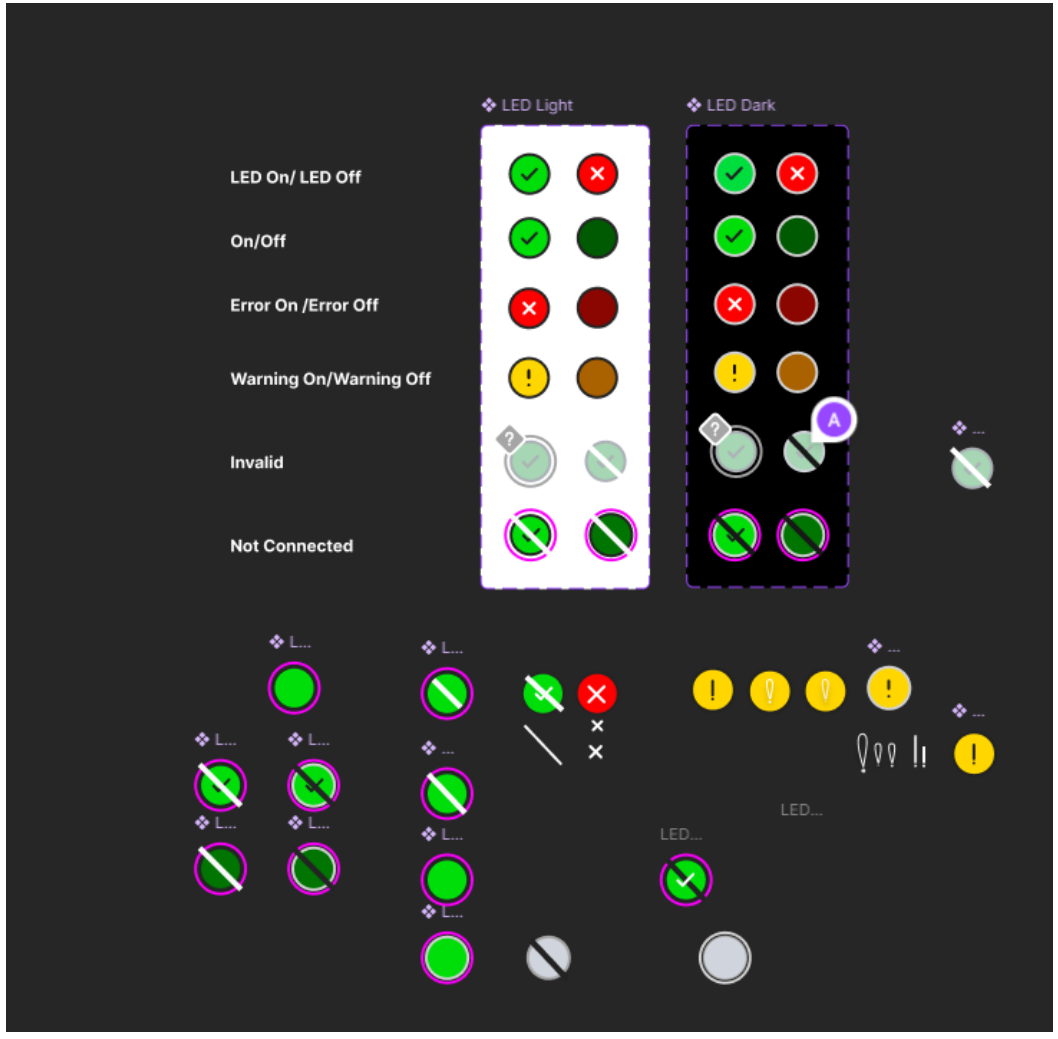
Export

External or Open sources Libraries



Component Libraries

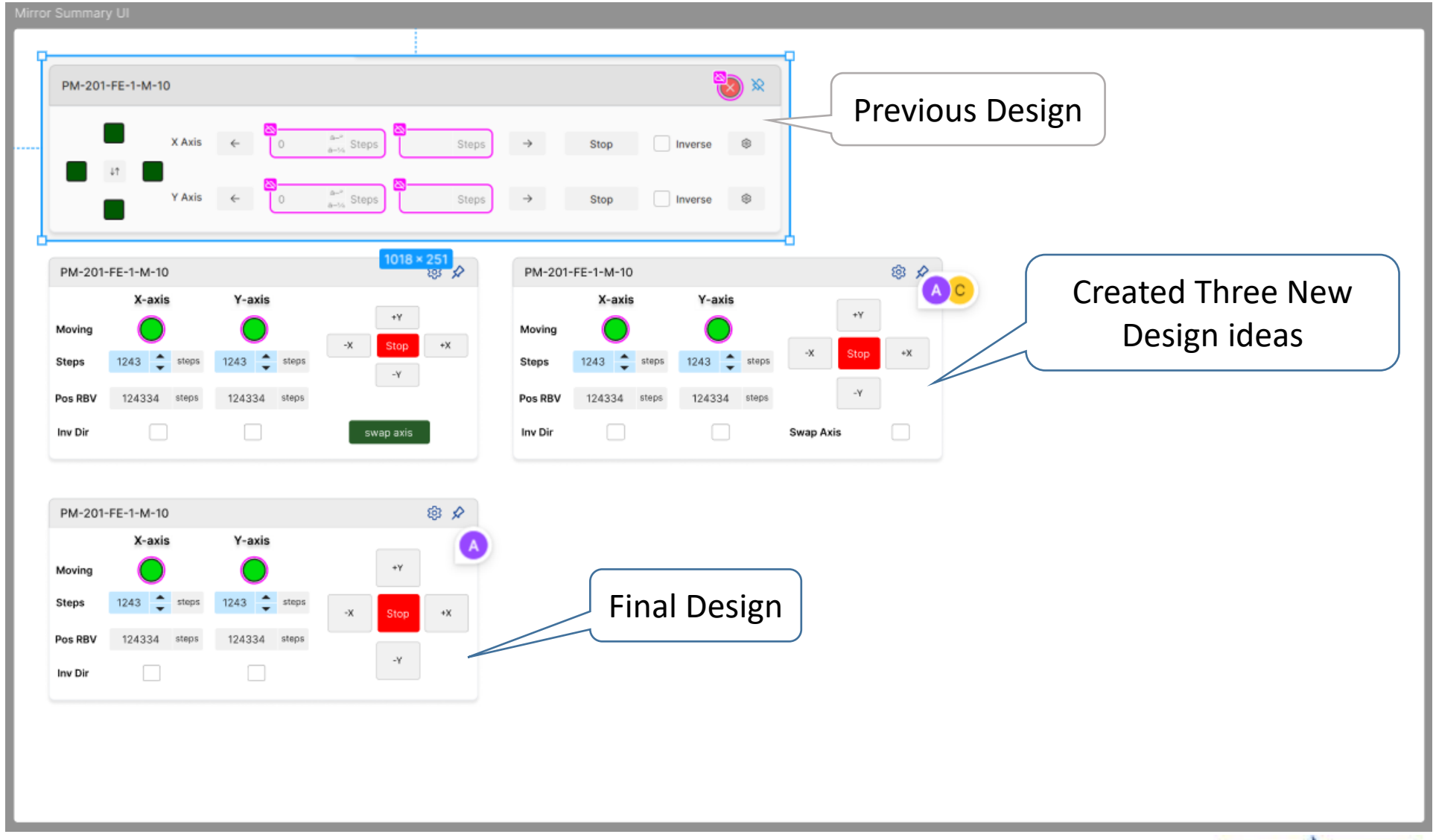
- We have our own Customized components Section based on our requirements.
- One of Monitoring Widget is LED Component.
- LED Component required to have the following Property with the ON/OFF Features.
- The Following States are Error, Warning, Invalid and Not Connected.
- We have made it feasible to see that even the scientist had their goggles on.



Led Examples

	Round		Rectangle	
	On	Off	On	Off
Binary			Binary On	Binary Off
Default			Default On	Default Off
Error			Error On	Error Off
Warning			Warning On	Warning Off
Invalid			Invalid On	Invalid Off
Not Connected			Not Connected On	Not Connected Off

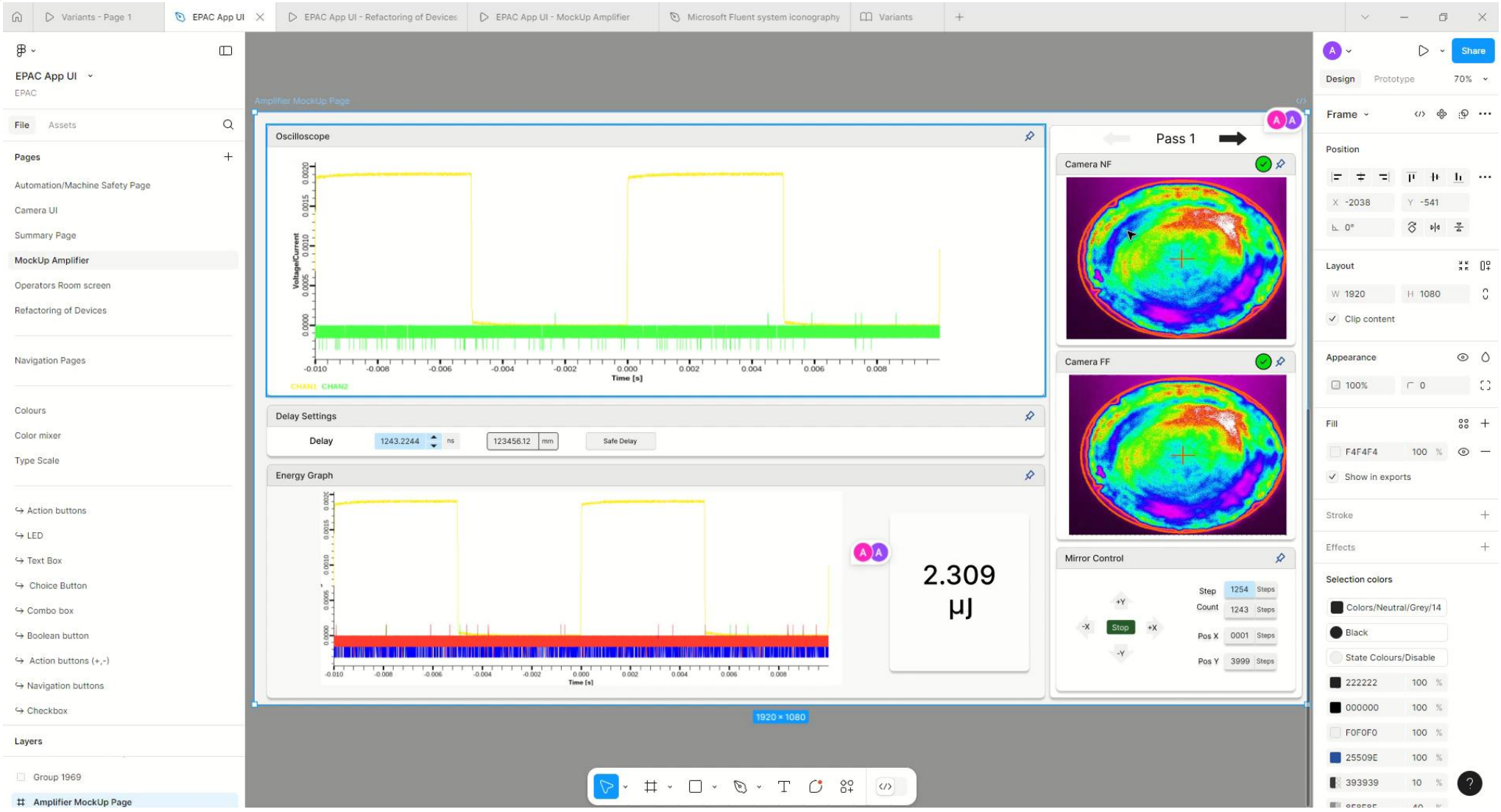
Designing Device UI



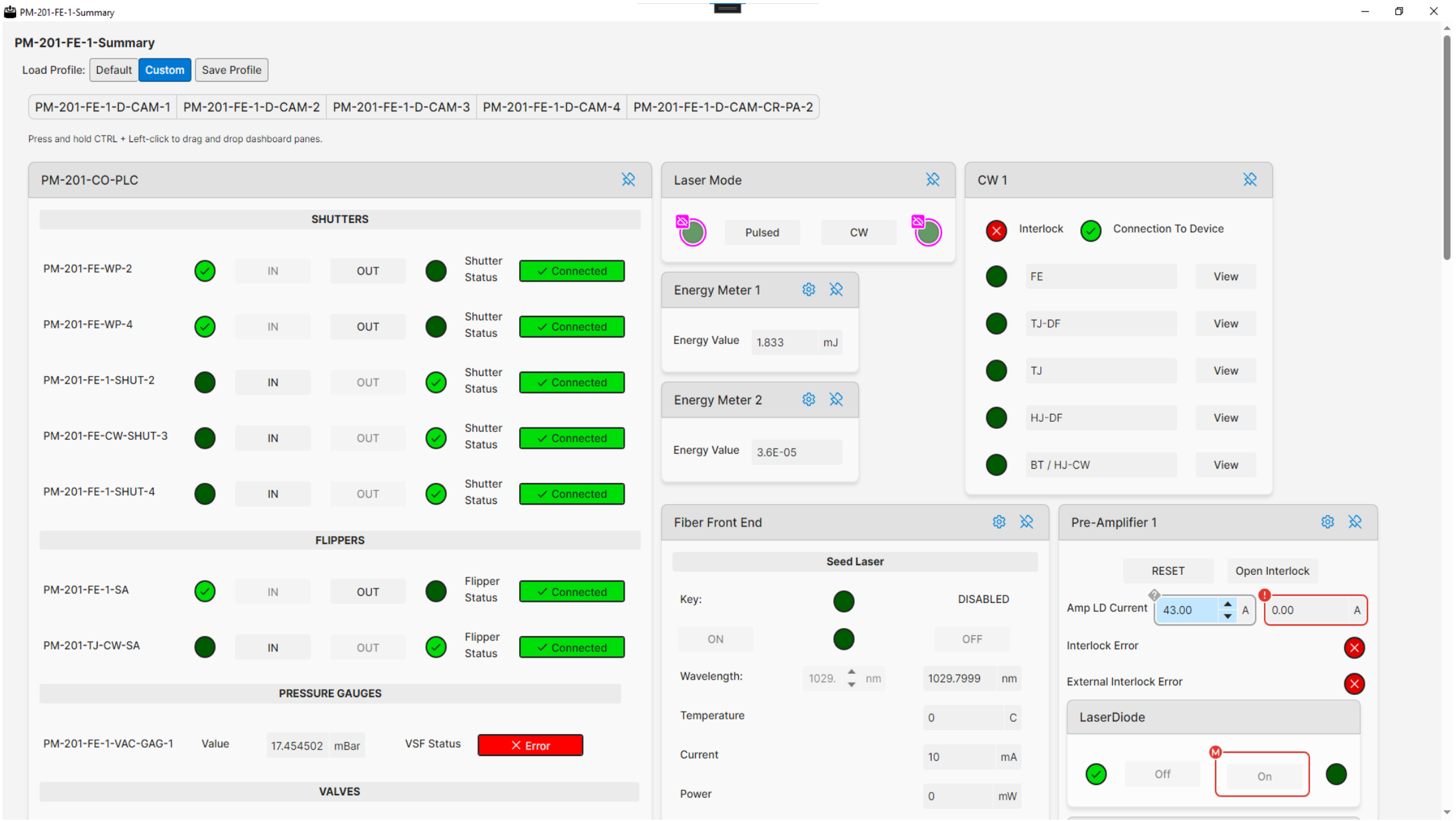
Customization and Prototyping

- The Figma Tool gives the Flexibility of Designing.
- Ensures our Unique Component Consistency.
- Helps us to visualize it in Dark and Light Modes UI Design.
- Prototyping gives the early interaction to test the Usability and flow.
- Identifies the Pain points before the development
- The prototypes have the navigation paths and forms etc.,
- These prototypes will be shared with the teams and stakeholders for final Approval.

Reference For Components integration & Prototyping



Our Work


PM-201-FE-1-Summary
PM-201-FE-1-Summary
Load Profile: Default Custom Save Profile
PM-201-FE-1-D-CAM-1 PM-201-FE-1-D-CAM-2 PM-201-FE-1-D-CAM-3 PM-201-FE-1-D-CAM-4 PM-201-FE-1-D-CAM-CR-PA-2
Press and hold CTRL + Left-click to drag and drop dashboard panes.
PM-201-CO-PLC
SHUTTERS
PM-201-FE-WP-2 IN OUT Shutter Status ✓ Connected
PM-201-FE-WP-4 IN OUT Shutter Status ✓ Connected
PM-201-FE-1-SHUT-2 IN OUT Shutter Status ✓ Connected
PM-201-FE-CW-SHUT-3 IN OUT Shutter Status ✓ Connected
PM-201-FE-1-SHUT-4 IN OUT Shutter Status ✓ Connected
FLIPPERS
PM-201-FE-1-SA IN OUT Flipper Status ✓ Connected
PM-201-TJ-CW-SA IN OUT Flipper Status ✓ Connected
PRESSURE GAUGES
PM-201-FE-1-VAC-GAG-1 Value 17.454502 mBar VSF Status ✕ Error
VALVES
Laser Mode
Pulsed CW
Energy Meter 1
Energy Value 1.833 mJ
Energy Meter 2
Energy Value 3.6E-05
CW 1
Interlock Connection To Device
FE View
TJ-DF View
TJ View
HJ-DF View
BT / HJ-CW View
Fiber Front End
Seed Laser
Key: DISABLED
ON OFF
Wavelength: 1029. nm 1029.7999 nm
Temperature 0 C
Current 10 mA
Power 0 mW
Pre-Amplifier 1
RESET Open Interlock
Amp LD Current 43.00 A 0.00 A
Interlock Error
External Interlock Error
LaserDiode
Off On

Conclusion

The Impact of Interactive UI Design

- Easy for the stakeholders to finalize, since it has clear intuitive.
- Increased Productivity ,Reduced Development time.
- Ensures better cross-platform performance.
- Tools like Figma and other open sources libraries which support increases the flexibility and Efficiency.
- Emphasize the Scalability and consistent design practices.

Thank You

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