

# Challenges & Problems

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# This is an interactive session

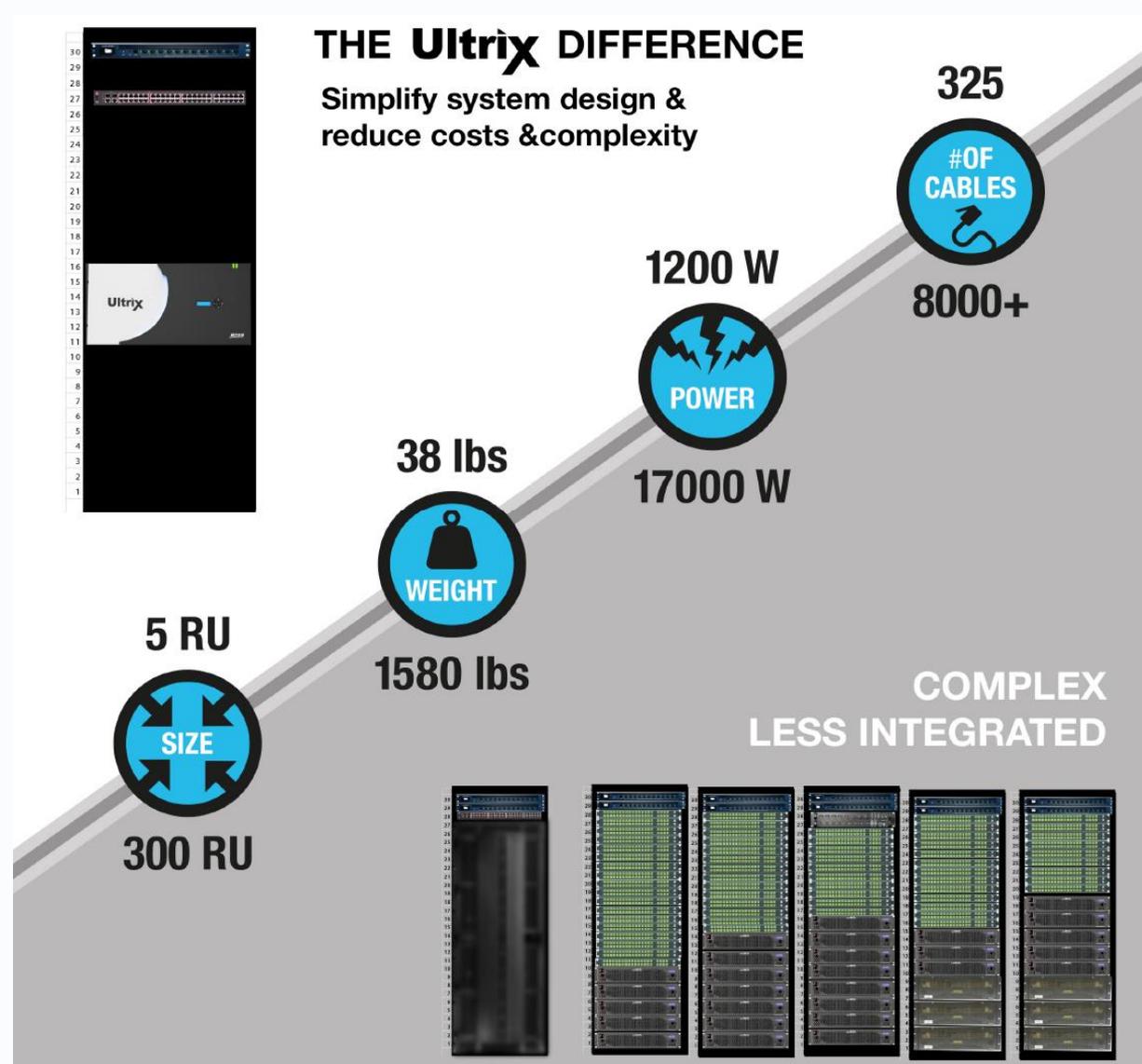
- Please feel free to ask questions at any time
- Please feel to contribute to any discussions
- If you would prefer, please ask me when we have any breaks or at lunch or dinner time – or call or email
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# Power

- Size
- Power Consumption
- Cooling

# Hyperconverged: sustainability

- Less Power
- Less HW lowers space/cooling requirements
- SW features extend useable product life
- Decrease weight lowers shipping and remote production impacts
- Cabling
- Setup



# Hyperconvergence-Simplicity

## One platform, endless configurations



Ultrix FR5



Signal Routing

Production Switching

Audio Processing

Mixing

Multiviewers

SDI/IP signal processing

Functionality enabled with Hyperconverged blades:

# WHAT IS ULTRIX CARBONITE?



Software Defined Production Engine (SDPE)

## SDxE – Software Defined xRossCompute Engine

- Intel Core i7x CPU, NVidia MxM3 GPU and a Massive UltraScale Plus FPGA utilizing HBM Memory.
- 8 HD or 4 UHD Capable 3D DVE Planer Channels. Each Planar Channel has Dedicated Alpha Path. Fly a Video + Alpha with a “Single DVE”!
- 4 HD or 2 UHD Warp Engine, including all the WARP effects from Acuity. Warp Engines apply to 3D Planer Channels on the SDxE.



# Control

- Operation
- Integrated Operation
- Automated Operation



# TD | TOUCH DRIVE

## Complete Panel Family

9 TD Control Surfaces to pick from.

Common Modules and Control Surface Operation

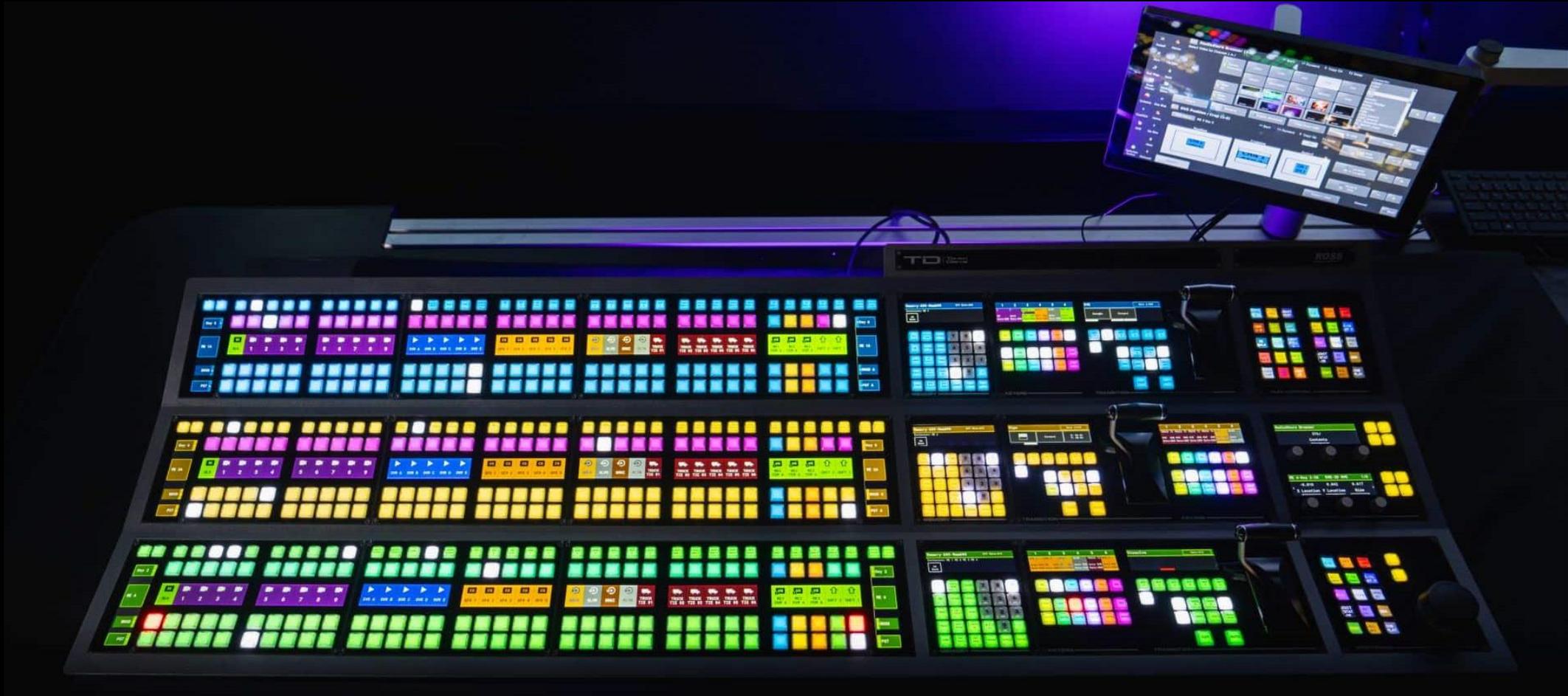
## Engine Agnostic

Carbonite and Ultrix Acuity are supported by our Panels.

Excellent for 2 Step Upgrades!

## Affordable Quality

Differentiation vs low-cost products. TD Panels are manufactured with Cost in mind but not at the expense of Operational Functionality!



TouchDrive TD3 35 XPT Control Surface



NORTH

SOUTH

15:39:40

15:39:41

mac

Football

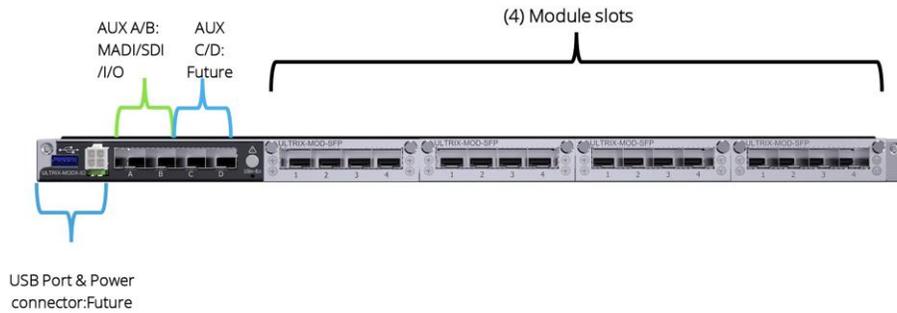
# Connectivity

- SDI
- ST-2110 IP
- Fiber
- HD or UHD
- SDR / HDR



# ULTRIX I/O CONNECTIVITY

## ULTRIX-MODX-IO

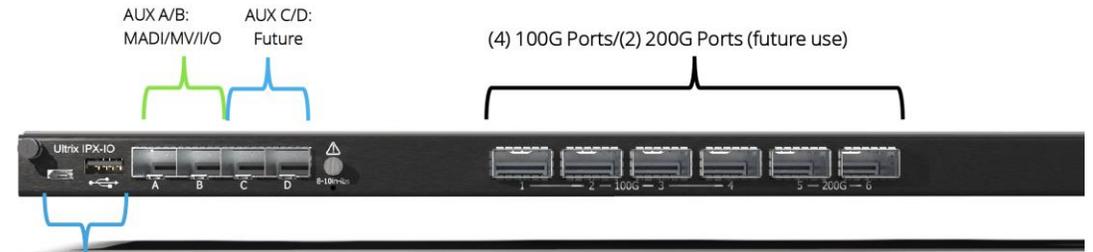


- HD / UHD
- SDR / HDR

## ULTRIX-HDX-IO



## ULTRIX-IPX-IO



# GRAPHITE

Cloud Production Center



# CARBONITE CODE



# CARBONITE CODE

...offers affordable, simple to use production switching capability which directly integrates into the ever-growing **NDI** ecosystem.

- Powerful software-based Carbonite!
- GPU-accelerated COTS hardware!
- TouchDrive compatibility!



# On-Set display or Large Screen Displays



# Low Latency Large LED Compositing

Live Events push the boundary for IMAG and Venue advertising to the extreme. Incorporating Live Video into the Live Rendering or pre-rendered content is a standard requirement.

Mosaic Offers Event Designers the ability to composite this pixel accurate graphics content with Live Video feeds (Low Latency (Live Video = 1 Frame Delay)).

Canvases enable the creation of multiple regions or single massive pixel counts spanning over multiple tiles to create seamless viewing experiences.



Pixel Accurate

Work in Pixel  
Accurate  
Resolutions and  
Control



Low Latency

Integration of  
Live Video  
Sources with  
Real Time or Pre-  
Rendered  
Graphics.

1 Frame of Delay



Multiple  
Destinations

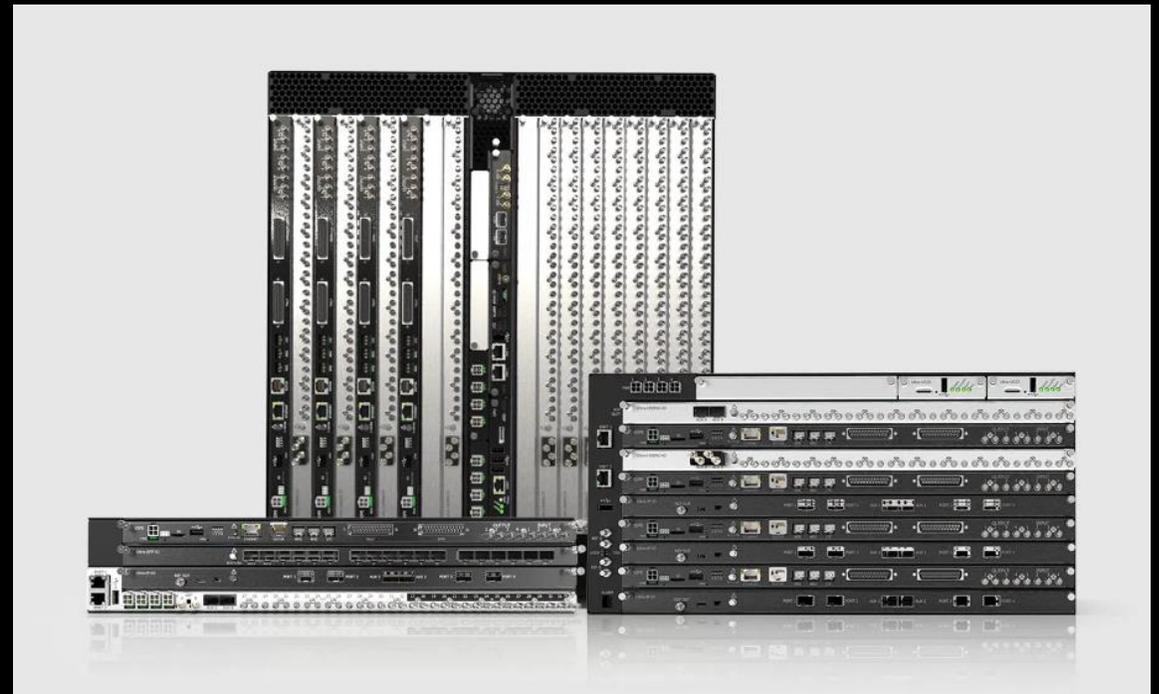
Control Multiple  
Screens of  
composited "Tiles".  
Create Canvases  
to match LED  
Resolutions

# Platform Choice

Mosaic leverages the Software Defined approach that was introduced with the Original Carbonite Black Series and Carbonite Black Mosaic.

Mosaic can be licensed on the Ultrix Hyper Converged Solutions allowing SDPE Blades to be run as Acuity MEs, Carbonite Switchers or now Mosaic Screen Processing.

Mosaic can also be licensed on the Carbonite Ultra Platform. Allowing users to deploy this highly efficient screen processing on a 1RU solution that can operate as a 3ME production switcher or MultiScreen Processor!

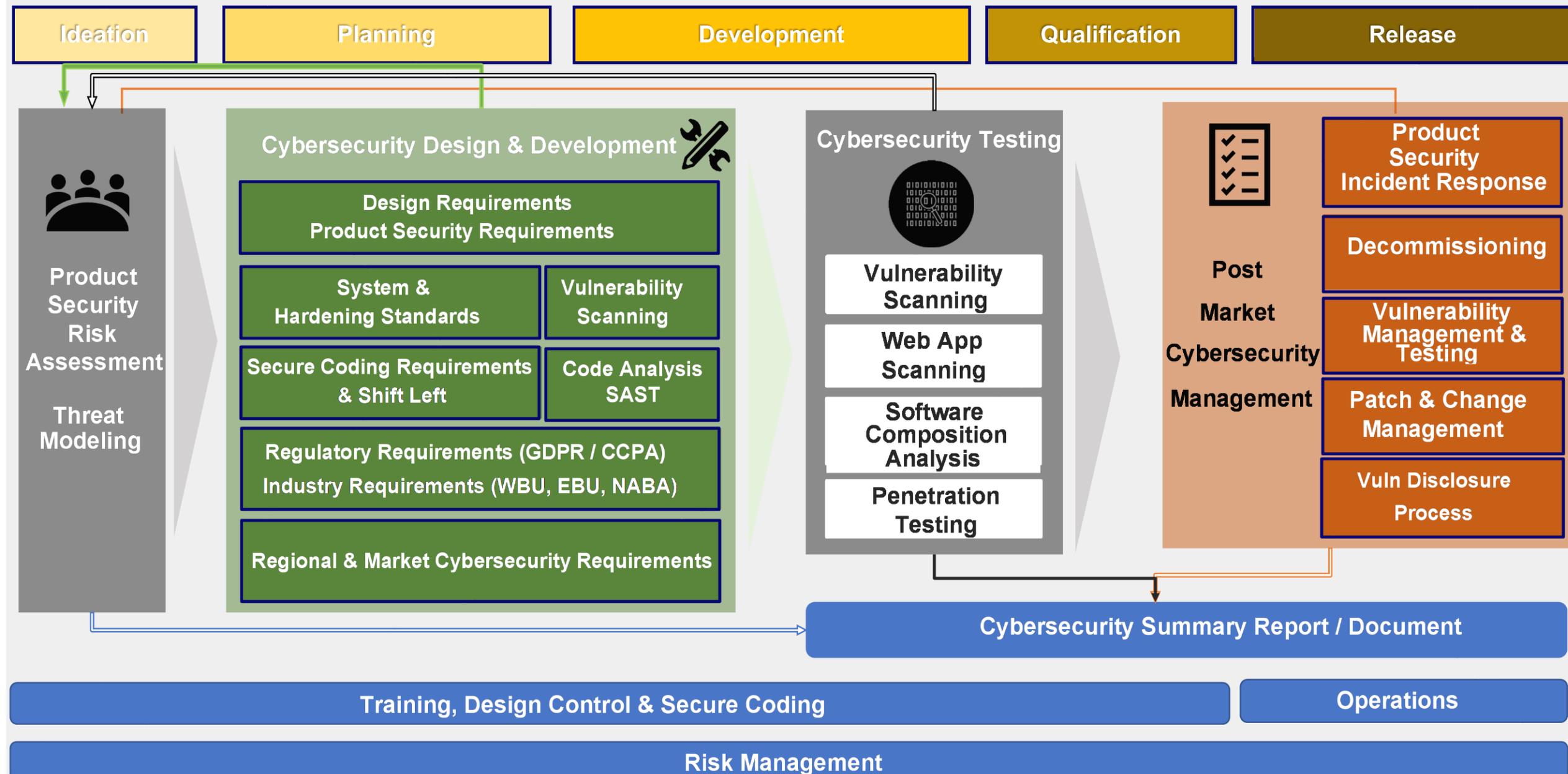


**ROSS**<sup>®</sup>

Product Security



# ROSS Product Security Framework







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