

Integrating IT Considerations into Airport Capital Delivery

ACI • NA 2019

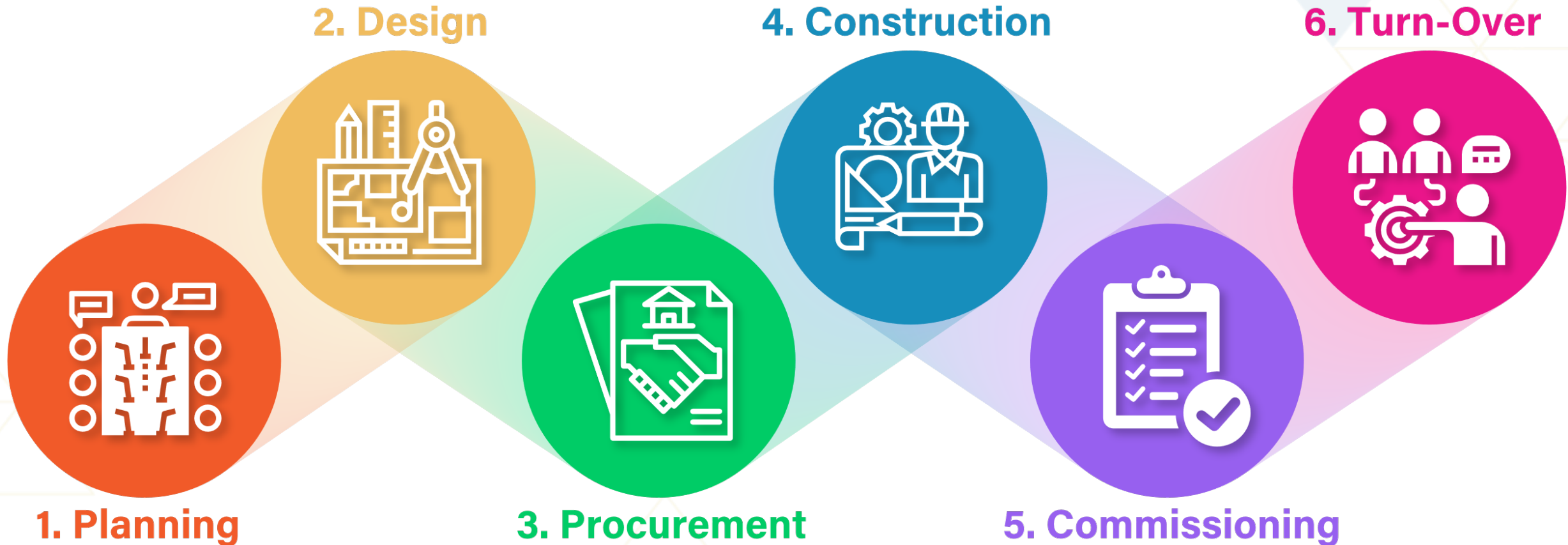
BIT/OpsTech Committee Workshop

Sunday Sept. 15th 1:15 – 2:30



Faith Group

Typical Construction Process Milestones



Planning

Clear Scope



Budget

Roles & Responsibilities

- ◁ What is an IT system in 2019?
- ◁ Plan upfront for future growth, full scope and future use cases. Communicate growth effectively with D/B teams, who may not see need for “Future Proofing”
- ◁ Work with stakeholders early in the planning process to develop goals, objectives, and detailed design intent – don’t hard spec anything at this stage.
- ◁ Get the right team in place up front (Owner, Consultant and Contractor)
- ◁ Understand and develop the initial budget – cost of construction in Airports is increasing, now at least 7%-10% of total.
- ◁ Clear roles and responsibilities
 - ◁ IT departments often have limited experience in construction
 - ◁ Create schedules and develop matrices that assign responsibilities
 - ◁ Realize that the internal IT department has no contractual obligation to the contractor

| | | DESIGNER | BUILDER | ACS INTEGRATOR | CCTV INTEGRATOR | SFO PM | PMSS | AIRPORT DUTY MANAGER | ITT | AVIATION MANAGEMENT | INFRASTRUCTURE INFORMATION MANAGEMENT | CARPENTER SHOP | LOCKSMITH SHOP | TECH SHOP | SIGN SHOP | AVIATION SECURITY |
|--|--|------------------|---------|----------------|-----------------|--------------|------|----------------------|-----|---------------------|---------------------------------------|----------------|----------------|-----------|-----------|-------------------|
| PROJECT DELIVERABLE (TASK OR ACTIVITY) | | DESIGN - BUILDER | | | | PROJECT TEAM | | STAKEHOLDERS | | | | | | | | |
| CONSTRUCTION | | | | | | | | | | | | | | | | |
| 14 | Review of Access Control System commissioning process with stakeholders | | R | C | C | I | R | I | I | | | I | I | I | | I |
| 15 | Confirm GIS and Emergency Responders mapping requirements with stakeholders | R | R | C | | | C | I | | | C | | | | | I |
| 16 | Review of ACS door mockup or early ACS door installation with stakeholders | | R | I | I | I | I | | | | | C | C | C | | C |
| 17 | Deliver permanent cores, key blanks & pin kits to SFO Lock Shop | | R | | | | I | | | | | I | C | | | |
| 18 | Assign camera names | | I | | I | | I | | | | | | | I | | R |
| 19 | Create and maintain ACS Door Commissioning status worksheet | | R | | | I | R | I | | | | C | C | C | | C |
| 20 | Prepare project specific ACS testing plan and schedule of commissioning activities | | R | C | C | I | I | I | I | | | I | I | I | | C |
| 21 | Notify AVSEC of Airport Security Program amendments or changed conditions | | C | | | R | R | I | | | | | | | | |
| 22 | Bench test electrified hardware | | R | | | | I | | | | | | | | | |
| 23 | Obtain static IP addresses from ITT | | R | C | R | | I | | | | | | | | | |
| 24 | Submit architectural backgrounds with SFO door numbers, room names and numbers to IIM | R | C | | | | I | | | | | | | | | |
| 25 | Submit project specific building interior security color code plan and Emergency Responders map to appropriate SFO Departments | R | C | | | | C | | | | | | | | | |
| 26 | Installation of doors and hardware | | R | | | | I | | | | | | | | | |
| 27 | Electrified hardware pre-test | | R | I | | | I | | | | | | | | | |
| 28 | Carpenter Shop and Lock Shop pre-inspection | | I | | | | I | | | | | R | R | | | |
| 29 | Submit maps to Verint and Intergraph 911 | | I | I | I | | | | | | R | | | | | I |
| 30 | Installation of Access Control devices and CCTV | | R | | | | | | | | | | | I | | |
| 31 | Tech Shop pre-inspection | | I | | | | I | | | | | | | R | | |
| 32 | ACS/CCTV Pre-Functional Testing | | R | R | R | | I | | | | | I | I | I | | C |
| 33 | Submit Computer Aided Dispatch programming requests to AVSEC | | C | R | | | I | | | | | | | | | I |
| 34 | Installation of door signage | | R | | | | I | | | | | | | | | |
| 35 | Schedule Sterile Area Sweep | | R | | | I | C | I | | | | | | | | C |
| 36 | Functional Performance Testing | | R | R | R | | C | I | | | | I | I | I | | C |
| 37 | Submit ACS/CCTV test reports for review | | R | R | R | | I | | | | | | | I | | I |
| 38 | Correct non-conforming items prior to scheduling acceptance testing | | R | R | R | | I | | | | | I | I | I | | I |

RACI Matrix - clarifies roles and responsibilities throughout the life cycle of the project

RACI Matrix - clear identification of roles and responsibilities throughout the life cycle of the project

Design

Staffing

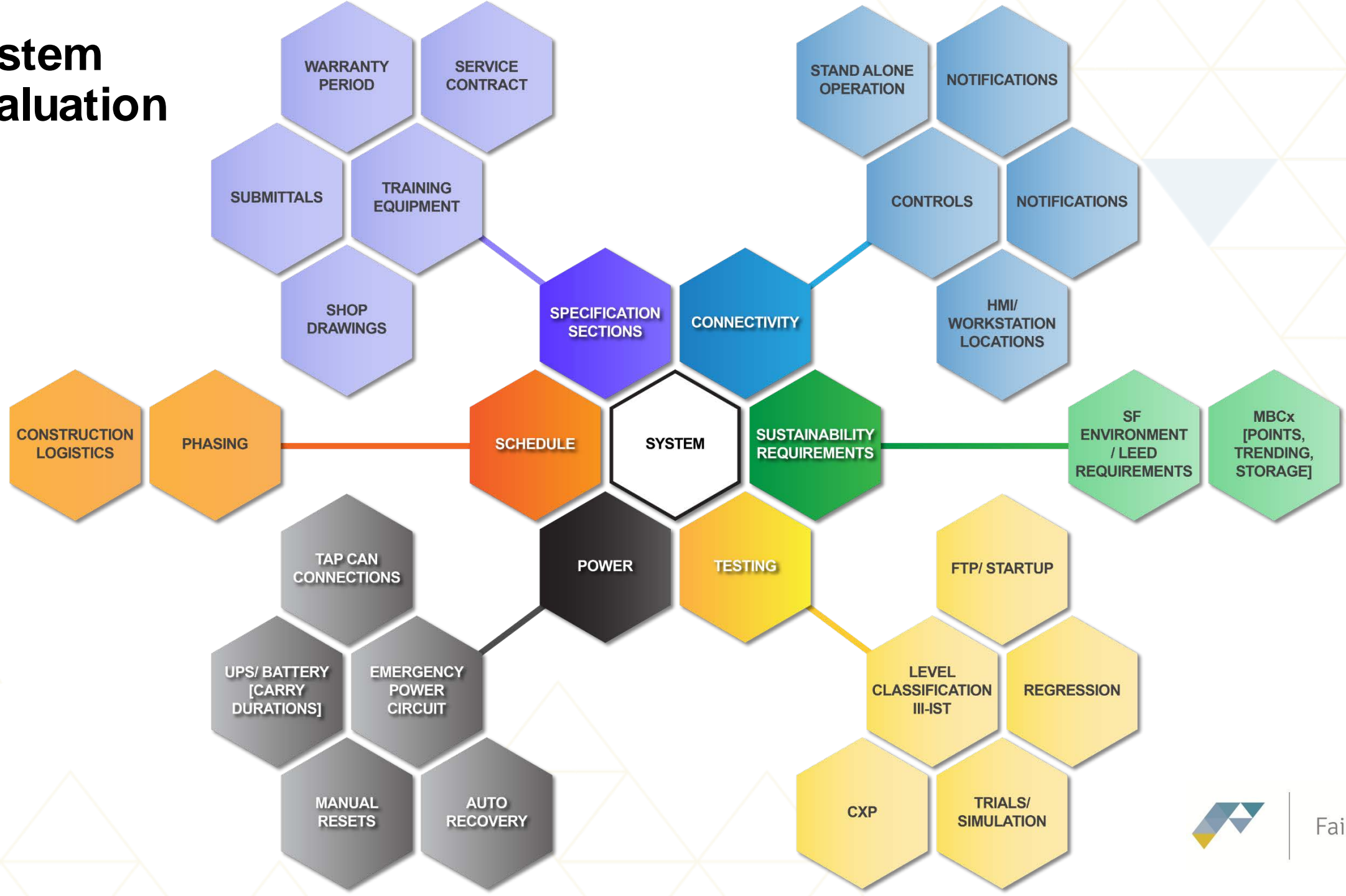


Standards

Packaging

- ◁ Establish design standards – extremely helpful for multi-project capital programs
 - ◁ ***Specs are not Standards***
- ◁ Dedicated internal IT Staff
 - ◁ PM + Technical Resource
- ◁ Determine best method to collect and transfer data
- ◁ Approach must be flexible to accommodate changes in process and technology
- ◁ Ability to meet regularly with all the impacted stakeholders including airlines and airport staff.
- ◁ Early identification of migration and commissioning requirements
- ◁ Package the design ***for how it will be procured***
 - ◁ Infrastructure impacts to early construction

System Evaluation



Procurement

Bidding Process

Extending Vs. Replacing

Packaging

- ◀ Define how Owner furnished equipment will be managed
 - ◀ Existing vs New Contract = Need to manage total contract cap
- ◀ ID long lead items – last minute procurements
- ◀ PLEASE don't split items within a specification, they are written within one spec for a reason. Coordination nightmare!
- ◀ RFQ -> RFP Approach
 - ◀ Product vs. Integrator
- ◀ Sole Source Procurement – Available?
- ◀ AIP Eligibility – Must Submit Request Prior to Approval
 - ◀ Buy American
- ◀ Define and Confirm Sparing Requirements – Often Missed! Balance with warranty periods

Construction

Dedicated IT Staff



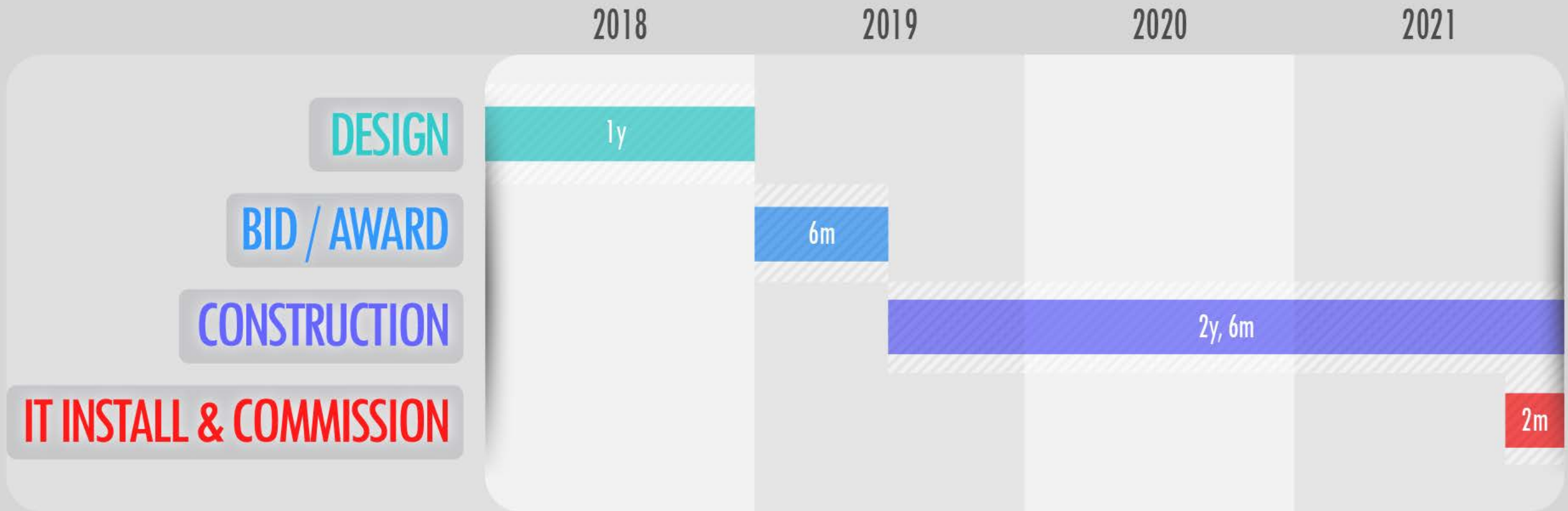
Roles

Schedule

- ◀ Understanding that a technology rollout is different than standard construction management
 - ◀ Lack of knowledge related to complex integration required
 - ◀ SME's must be part of the delivery team
 - ◀ Traditional electrical contractors left to manage 20 specialty contractors/vendors
 - ◀ IT is always pushed to the end!
- ◀ Need to have people on staff who are strictly focused on managing the IT program
- ◀ Allow sufficient time to install equipment
- ◀ Understand and coordinate IT department role in the construction process
- ◀ Coordination meetings early on and on a regular basis, beyond typical construction progress meetings HIGHLY recommended.

STANDARD CAPITAL

P R O J E C T T I M E L I N E



Commissioning

Documentation



**Current
Vendors**

**End User
Involvement**

- ◀ Start early planning and defining commissioning process
- ◀ Develop detailed written plan, focused on user requirements
- ◀ Identify all players
- ◀ Develop realistic timeline
- ◀ Allow time in the schedule for failures and to properly cure
- ◀ Substantial Completion Vs. Final Completion





SYSTEM TO BE VALIDATED AHEAD OF WORKSHOPS



STATUS

PROJECT COMPLETION DATE

| | | | | | |
|--------------|---|---|--|---|--|
| MR2.2 - P.27 | Cable Tests Reviewed: SFO Cat-6a | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.28 | COM/SOC Door Security Commissioning Reports | | | Status Unknown | |
| MR2.2 - P.29 | COM/SOC CCTV Commissioning Reports | | | Status Unknown | |
| MR2.2 - P.30 | AVSEC Door Security Commissioning Reports | | | Status Unknown | |
| MR2.2 - P.31 | AVSEC CCTV Commissioning Reports | | | Status Unknown | |
| MR2.2 - P.32 | Vesta Equip. Room Door Security Commissioning Reports | | | Status Unknown | |
| MR2.2 - P.33 | Vesta Equip. Room CCTV Commissioning Reports | | | | |
| MR2.2 - P.34 | Grounding Tested and Validated: Vesta TGB | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.35 | Grounding Tested and Validated: COM/SOC TR TGB | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.36 | Grounding Tested and Validated: AVSEC TR TGB | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.37 | Critical Power Test Commissioning Report | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.38 | UPS Commissioning Tests/Certification | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.39 | Pre-action Test Results | ✓ | | Submitted and Reviewed | |
| MR2.2 - P.40 | System Furniture Installed | ✓ | | | |
| MR2.2 - P.41 | Workstation Computers Installed | | | Not Complete, Imaging Underway | |
| MR2.2 - P.42 | Workstation Peripherals Installed | | | Not Complete | |
| MR2.2 - P.43 | Video Wall Installation Complete | ✓ | | Components Installed | |
| MR2.2 - P.44 | Video Wall Configuration | | | Awaiting Output PC Imaging and Installation | |
| MR2.2 - P.45 | Video Wall Training Complete | | | | |
| MR2.2 - P.46 | AT&T Vesta Installation | ✓ | | | |
| MR2.2 - P.47 | AT&T Vesta Configuration | | | Underway | |
| MR2.2 - P.48 | AT&T Vesta Wall Clock | | | Not Yet Installed | |
| MR2.2 - P.49 | AT&T Vesta Status Display Monitor | ✓ | | | |
| MR2.2 - P.50 | ACD Status Lights Programmed and Tested | | | | |
| MR2.2 - P.51 | AT&T Vesta Training Complete | | | | |
| MR2.2 - P.52 | AT&T Vesta Activation | | | | |

Owner Turn-Over

Training Program



O&M Support

Continuous Improvement

◀ Training, training, training...

◀ Service Level Agreement

◀ Warranty Period Vs. Extended Support

◀ On-going Test Environment

