



## **Item 8.5: Technology and Projects Update**

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Reliability and Markets Committee Meeting





ERCOT Public

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# Technology and Projects Update: Overview

- **Purpose**
  - Provide an update on recent project activity
- **Voting Items / Requests**
  - No action is requested of the R&M Committee or Board; for discussion only
- **Key Takeaways**
  - 2023 OKR projects remain on budget and on schedule
  - The project pipeline continues to implement priority projects of various sizes and types
  - Project cost and duration estimate accuracy has improved in recent years

# 2023 OKR Projects Stoplight

Status	Project	Update
	ERCOT Contingency Reserve Service (ECRS) Implementation	<ul style="list-style-type: none"> <li>On Track – Release Cycle 3 (6/8/2023)</li> <li>Market Interface Specifications provided in September 2022</li> <li>Market testing window opens mid April 2023</li> <li>Market discussion of technical impacts at TWG</li> </ul>
	Energy Management System (EMS) Upgrade	<ul style="list-style-type: none"> <li>On track – release in November 2023</li> <li>Monitoring recovery from prior testing delays due to resource gaps</li> <li>Internal testing through 9/29/2023</li> <li>Closed loop testing begins 9/30/2023</li> <li>Market discussion of technical impacts at TWG</li> <li>Currently limiting EMS changes that impact in-flight projects</li> <li>Post-ECRS EMS changes limited to critical/emergency items</li> </ul>
	DC5 Infrastructure Refresh Program	<ul style="list-style-type: none"> <li>On track – key milestones defined for 2023</li> <li>Tracking to progress targets set for server migrations, backup migrations, database migrations, and network firewall refresh</li> <li>Mitigating supply chain delays through accelerated purchase</li> <li>Delivered hardware required for EMS Upgrade</li> <li>Migration schedules coordinated with other portfolio activity</li> </ul>
	Treasury Management System Implementation	<ul style="list-style-type: none"> <li>On Track – key milestones defined for 2023</li> <li>Scope – automate process to match financial transactions to invoices</li> <li>Vendor selected and engaged</li> <li>2-stage roll-out strategy: non-integrated solution and fully integrated solution</li> <li>Planning phase schedule changes to align with vendor's delivery methodology and complete planning for both stages; due in February</li> </ul>

**Key Takeaway:** All 2023 OKR projects remain on budget and on schedule

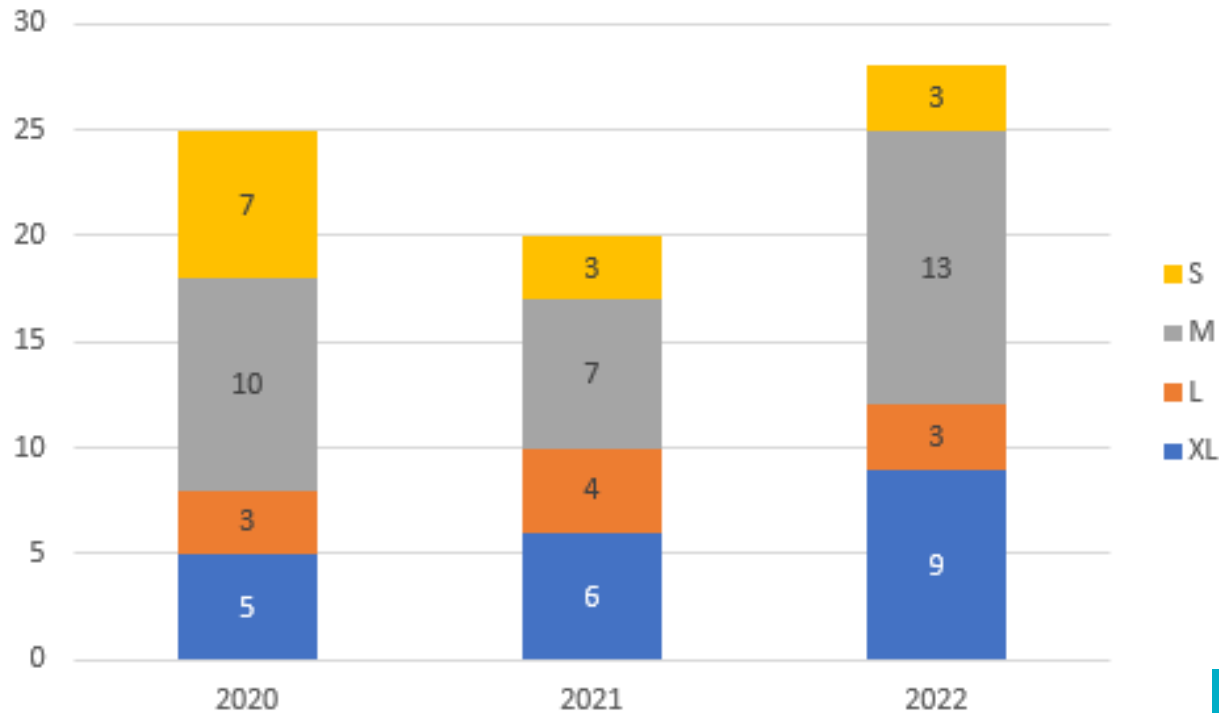


# ERCOT Application Release & Tech Health Upgrades

- Application Release Highlights
  - 6 Day Forecast Published to ERCOT.COM
  - Minor Retail Enhancements for Customer Billing Contact Information (CBCI) Submission
  - 1 NPRRs/SCRs
    - NPRR 1020: “Add Definition of Integrated Battery Storage Systems (IBSS)”
- Technology Health Upgrades
  - 43 Application Maintenance Events

**Key Takeaway:** R1 was delivered on schedule; despite ice storm

# Project Go-Lives by Budget Range



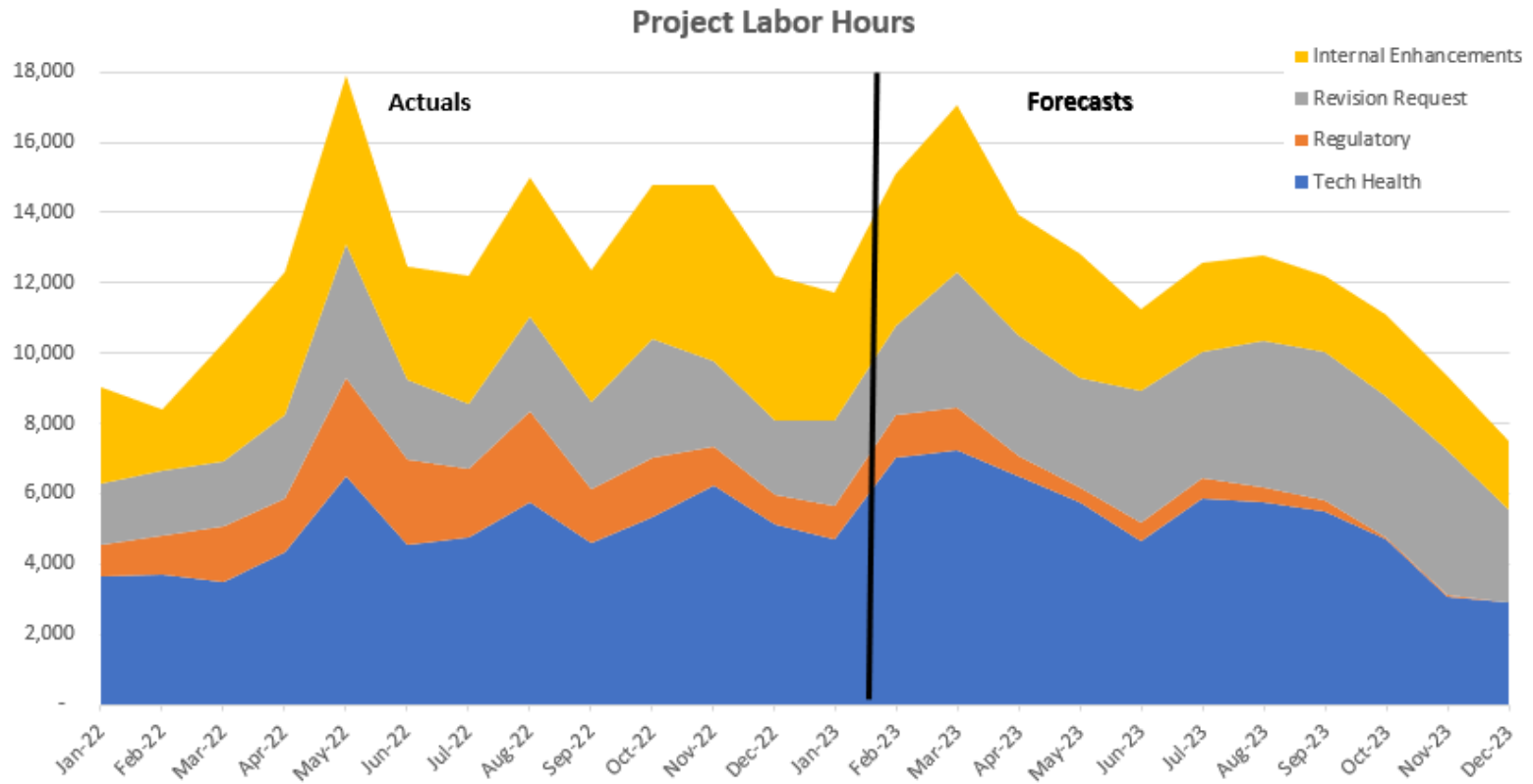
**Key Takeaway:** Key efforts continue to be delivered while managing numerous active projects

2022 examples: RARF Replacement, FFR Advancement, DGR/DESR Implementation Strategy, Securitization Subchapter N, NPRR1093 Load Resource Participation in Non-Spinning Reserve

Budget Range	
S	(<\$100k)
M	(\$100k-\$500k)
L	(\$500k-\$1M)
XL	(>\$1M)



# Project Labor Hours 2022-2023



**Key Takeaway:** “Tech Health” projects comprise a significant amount of total project labor

- “Forecasts” include in-flight project forecasts plus estimated labor for future Not Started projects
- Prioritization is a recurring activity where ERCOT executives approve project starts for upcoming quarters based on resource availability

# Percent Variance from Impact Analysis (IA) Cost Range

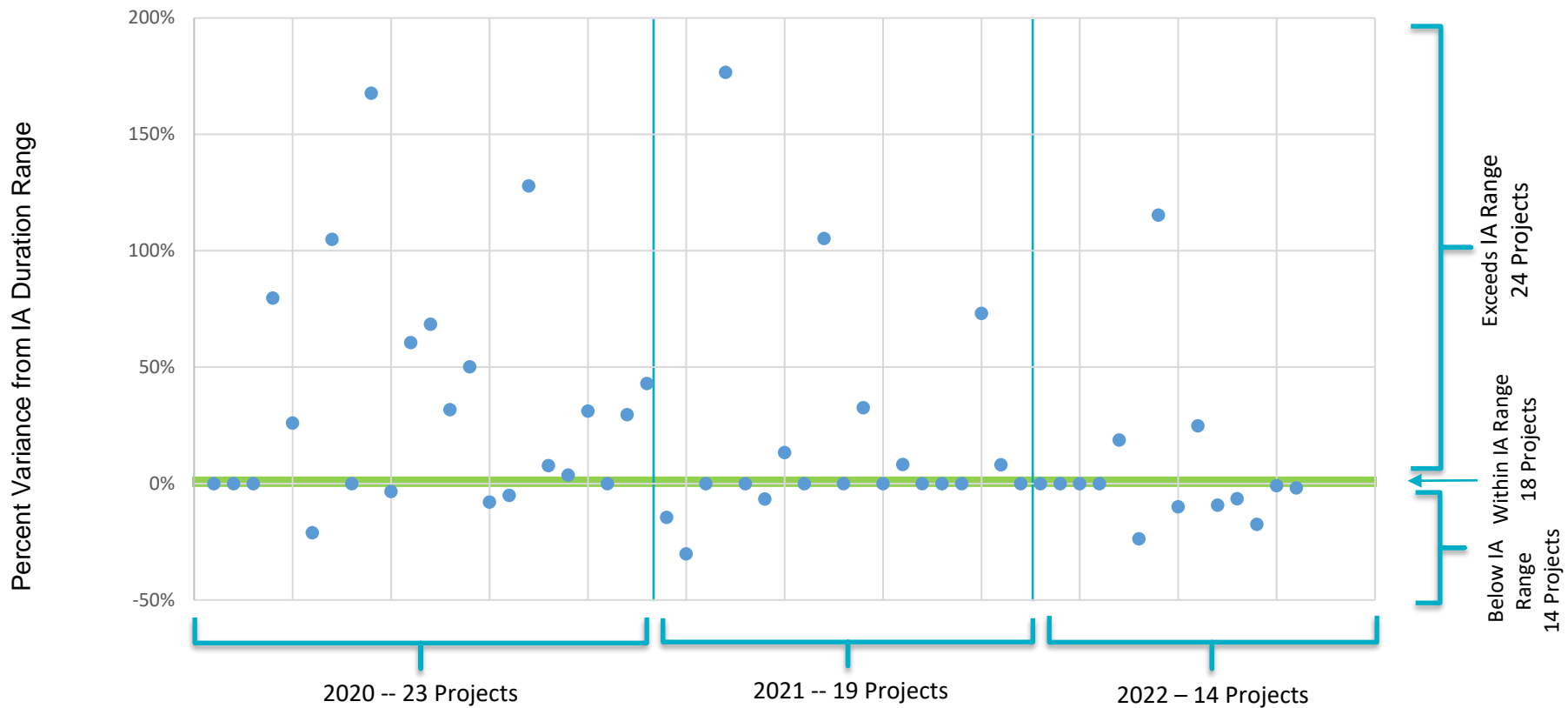


**Key Takeaway:** IA accuracy has improved since 2019 due to increased efforts to better define projects during the “concept” phase

- Estimates for new ERCOT systems or capabilities tend to have larger variances due to complexity/unknowns
- Project Planning phase produces a more detailed cost estimate which must be approved by ERCOT management prior to proceeding to Execution phase



# Percent Variance from Impact Analysis (IA) Duration Range



**Key Takeaway:** While changing priorities can impact duration, it does not necessarily correlate to higher costs

- Duration estimate accuracy has also improved since 2019
- Changing priorities can divert resources from less time-critical projects, extending duration
- Multi-phase deliveries often lead to extended timelines but not necessarily higher costs; chart only measures final release



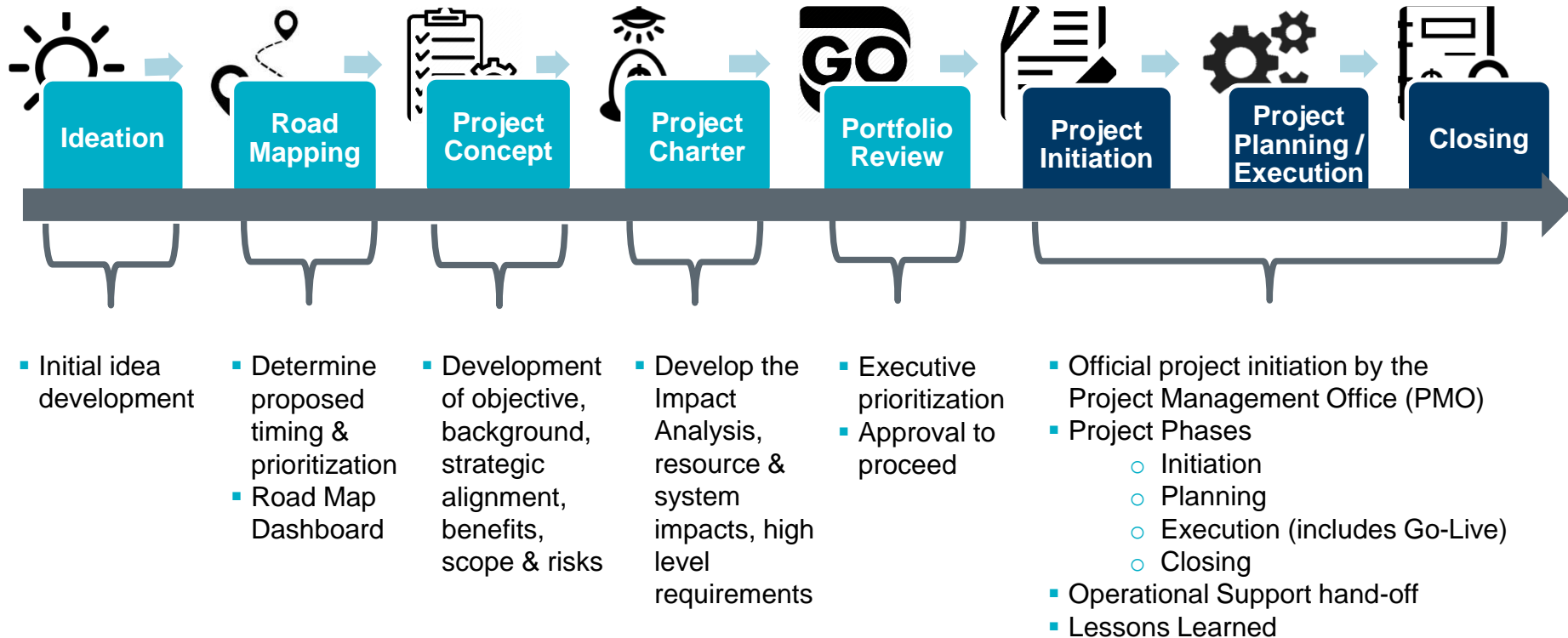


## Next Steps

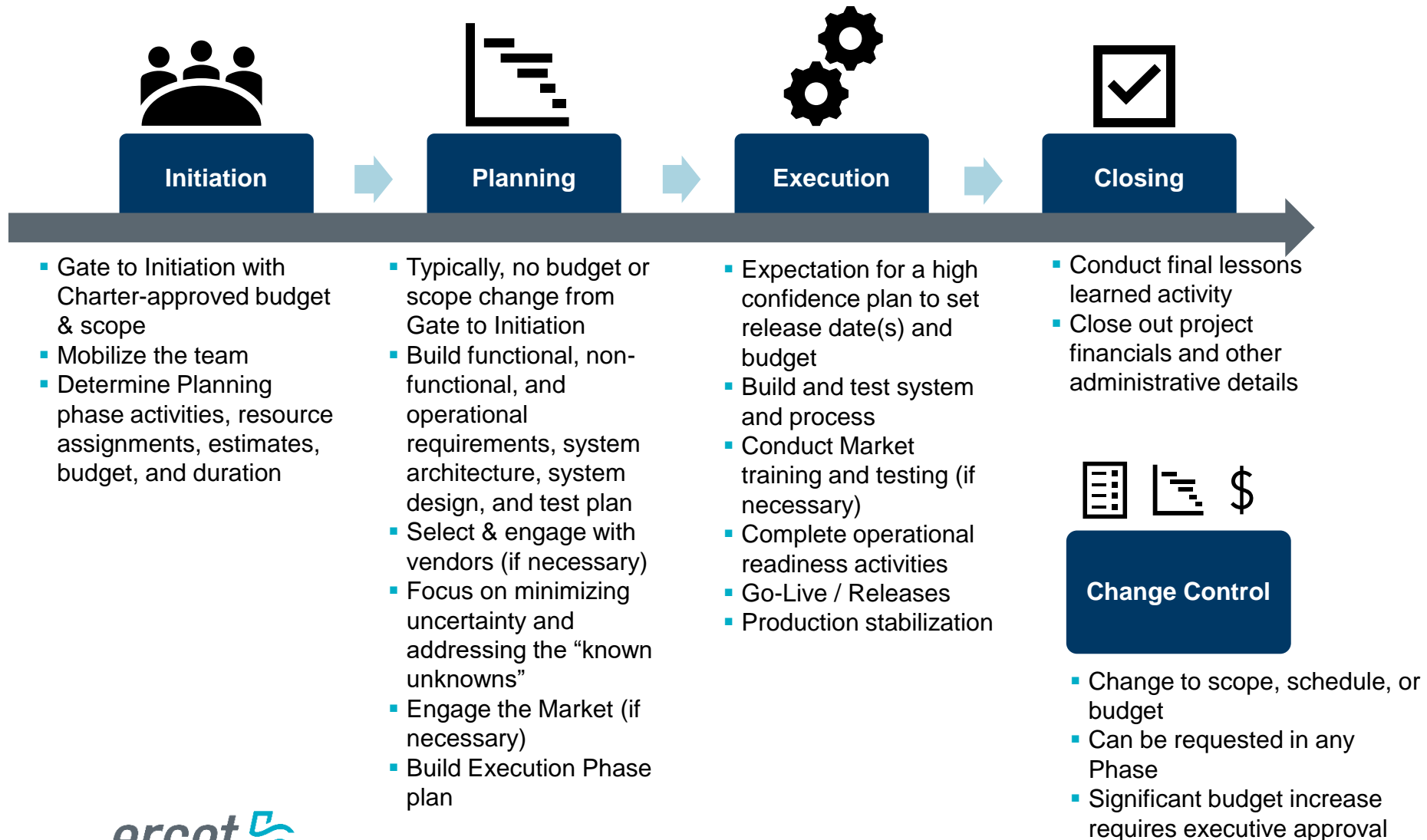
- PMO and IT reports will be part of each R&M agenda
- Portfolio statistics will be reported twice per year
  - February and August

# Appendix

# ERCOT's Project Portfolio Process



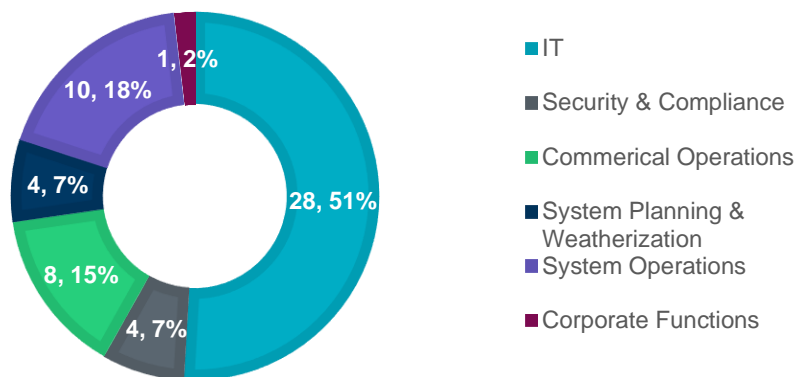
# ERCOT's Project Gating Process



# Active Project Delivery

- 55 active projects
- Consistent profile of active projects
  - Majority are Large or XL
  - Address technical health
  - Report healthy status
- 2022 worked 83 unique projects

## PROJECTS BY BUSINESS AREA



## PROJECTS BY BUDGET RANGE

