



Enhanced Engagement

For Increased Commercial DR Participation

Agenda

01

History

02

Hypothesis

03

Enhancements

04

Looking Ahead

05

Questions

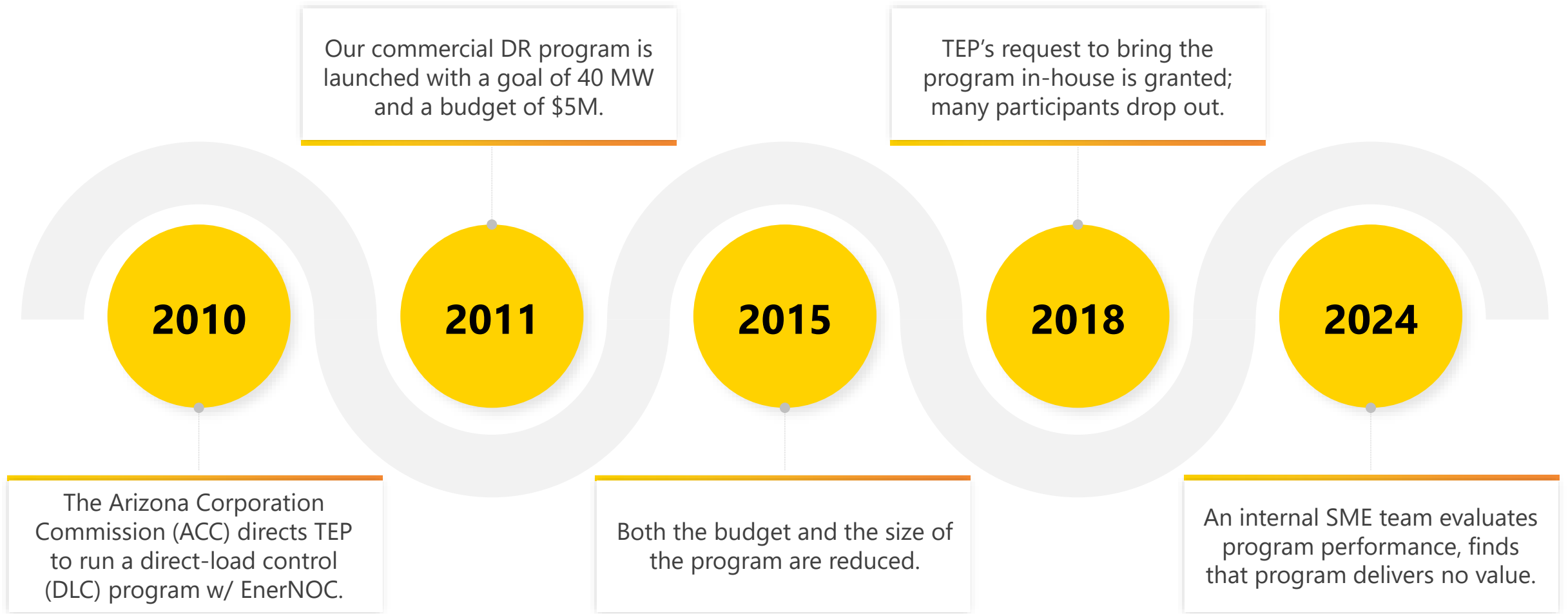


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History

2010 – 2024

A Brief History of Commercial DR @ TEP



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We thought we could run the program more cost-effectively in-house. When we transitioned program administration about **90%** of participants dropped out.

Art Fregoso

Former Account Manager

Three Crucial Mistakes

01

Technology

- TEP had no plan for replacing the KYZ Pulse devices that EnerNOC (then Enel) had been using to enable the program.
- Our utility underestimated how important the enabling technology was to program administration, event dispatch, and program performance.
- We assumed we could run DR on auto-pilot, but we were wrong.

02

Feedback

- We replaced the EnerNOC system with an e-mail notification system that proved to be buggy, difficult to use and maintain.
- We moved from near-real time feedback during events to next-day, online access.
- Customers stopped responding to event notifications.

03

Engagement

- Participants complained about the change, but we did not adjust the program design.
- Customers had less visibility about DR event participation and their contributions.
- Some customers didn't even realize they were enrolled in the program.



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Hypothesis

Revamp the program

Give Customers What They Want

01

Enabling Technology

We're finally going to do what we probably should have done in 2018 – replace EnerNOC's technology with something comparable but modern.

- ✓ Data from AMI
- ✓ Estimate baseline demand
- ✓ Mobile notifications
- ✓ Real-time feedback
- ✓ Monitoring participation

02

Real-Time Feedback

This time we're going to listen to customer feedback and incorporate into our program design. Our first goal is to return to 2018 numbers.

- ✓ Event dispatch
- ✓ Tiered participation
- ✓ Options for event response
- ✓ Marketing
- ✓ Communications

03

Best-in-Class

In addition to learning from the past and listening to customers, we're also looking to the experiences of other utilities that have come before us.

- ✓ BC Hydro
- ✓ Portland General
- ✓ APS

04

Optimized

By analyzing customer and event data, we hope to be able to optimize program delivery over time, build out VPP capabilities.

- ✓ Customer-program fit
- ✓ New program options
- ✓ New enabling tech
- ✓ Total system benefits



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Enhancements

Quick changes, quick wins

Capabilities & Constraints

Eligibility

Any non-residential customer can participate, though we're targeting customers that can commit to flex 100 kW.

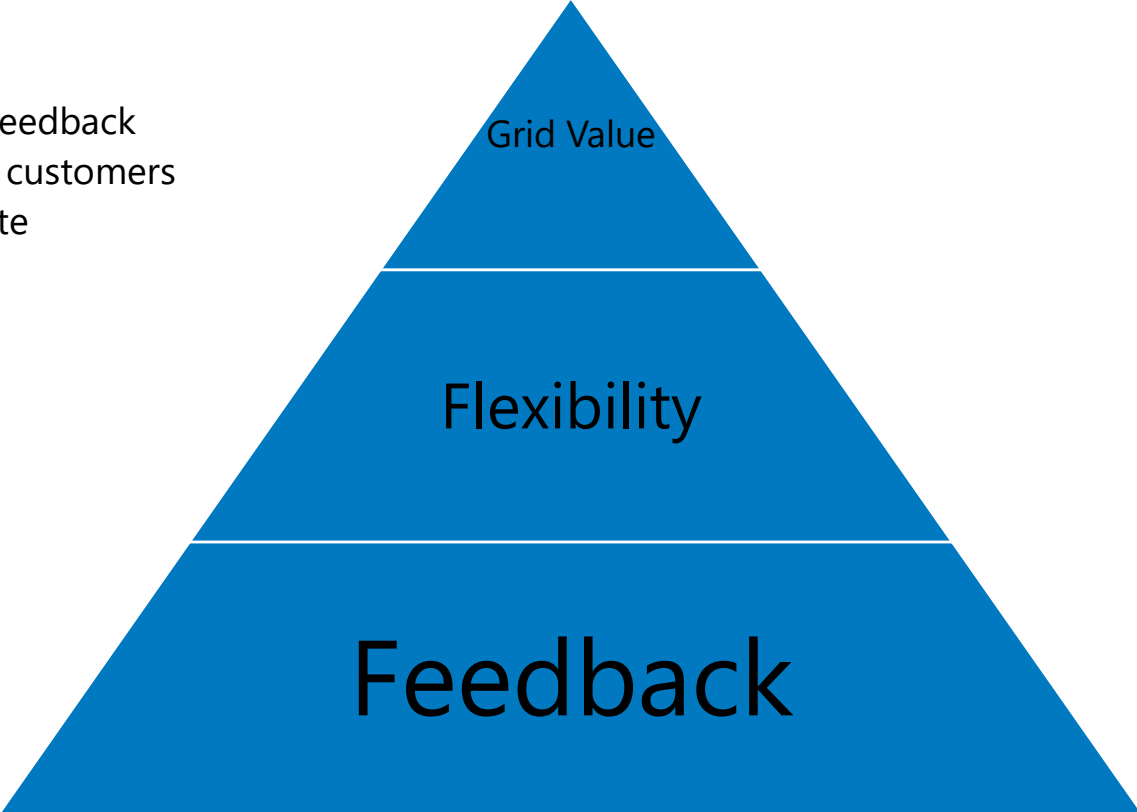
Payments

Our budget is set through 2026 but we're currently re-evaluating incentive levels, structure.

Measures

Starting with feedback devices; some customers may use on-site generation.

To rebuild this program, we will start by improving feedback & engagement as foundational capabilities.



Step 1: Enhanced-engagement model

- A low-cost gateway to engage customers
- Bring back “real time” monitoring and “instant feedback”
- Improve customer experience with modern tech, experience
- First step in bringing back commercial DR program value
- Future opportunities may also be unlocked
 - *Elexity* (piloting now)
 - *SkyCentrics*
 - *L+G Revelo* (AMI 2.0)
 - *Edo* (building-side insights)



Step 0.5: Micro-pilot to test the technology (not-so-quick)



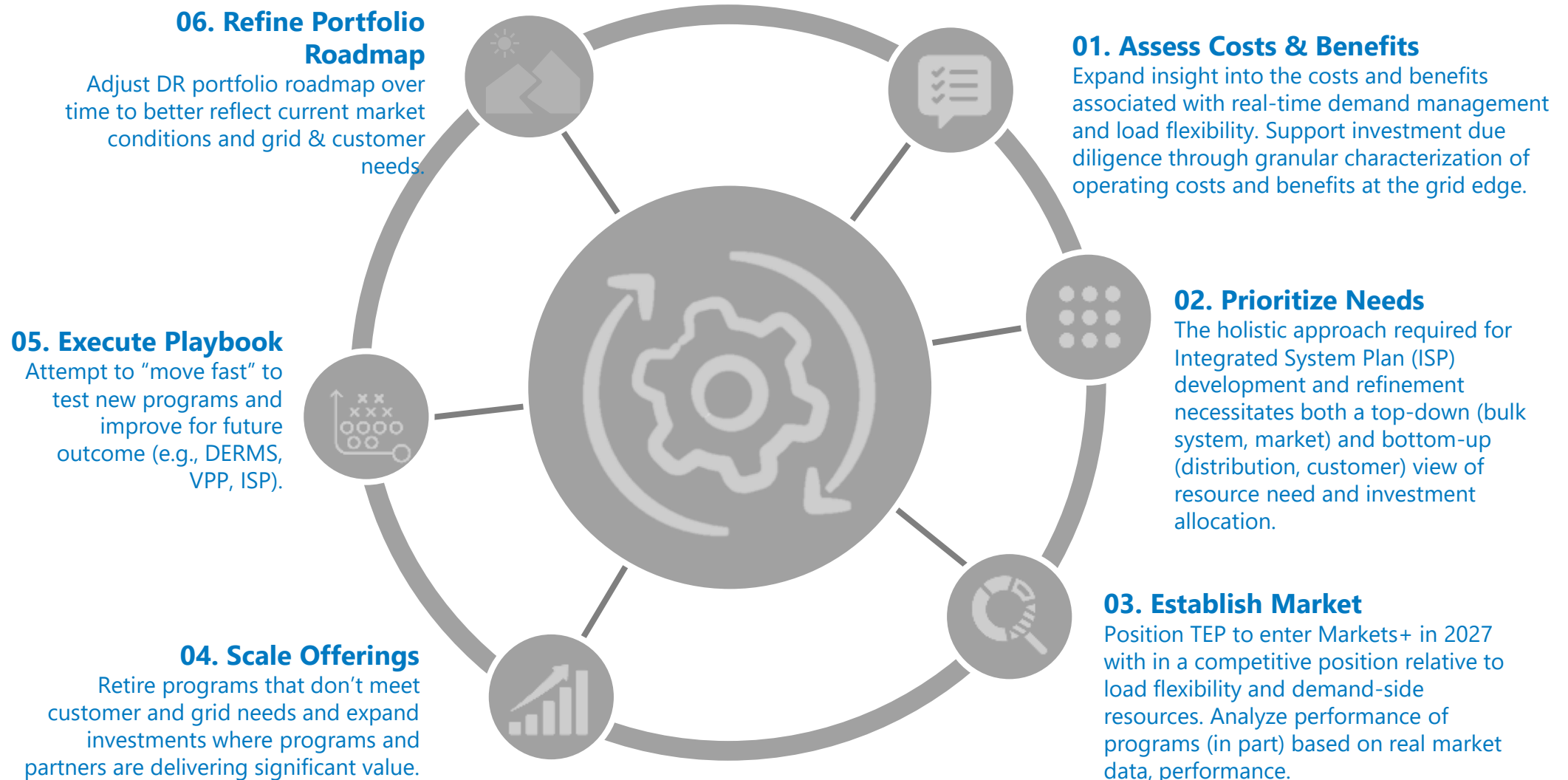


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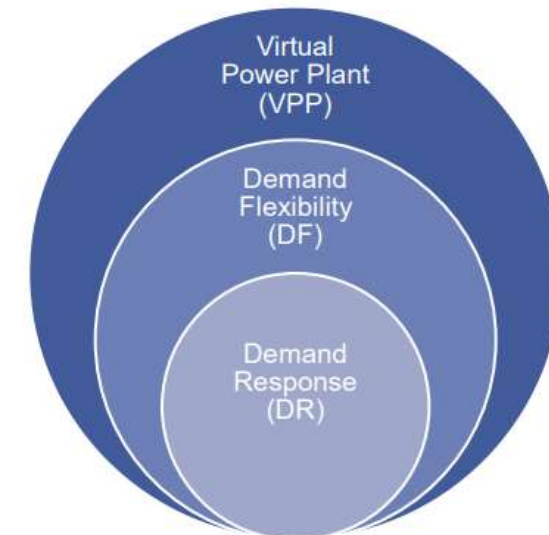
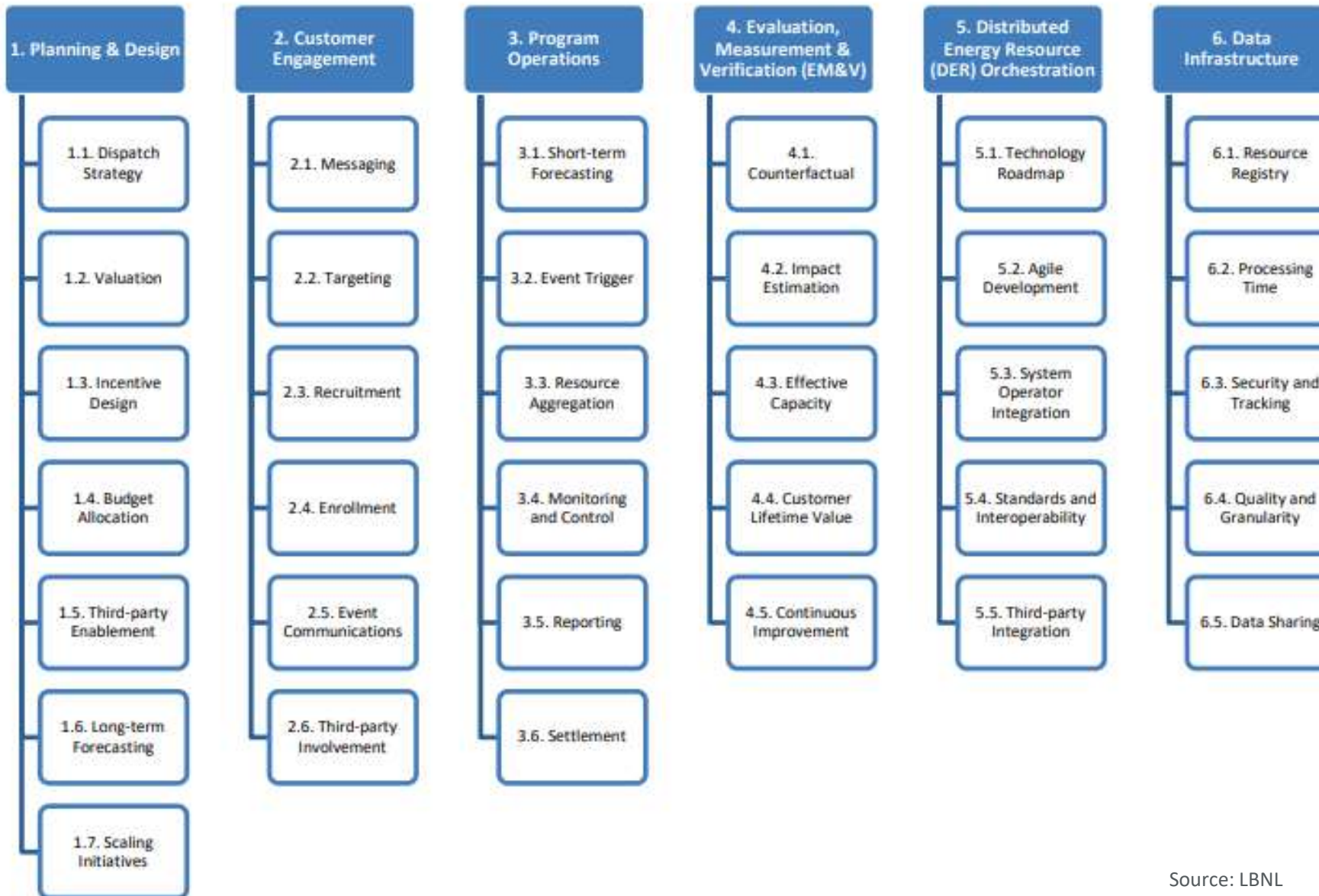
Looking Ahead

Toward VPP Development

Making investments in flexible demand-side resources at TEP



Maturity model – evolving from DR to demand flexibility to VPPs



Source: LBNL



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Questions?

Thank you!



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