



# Outage Management 101

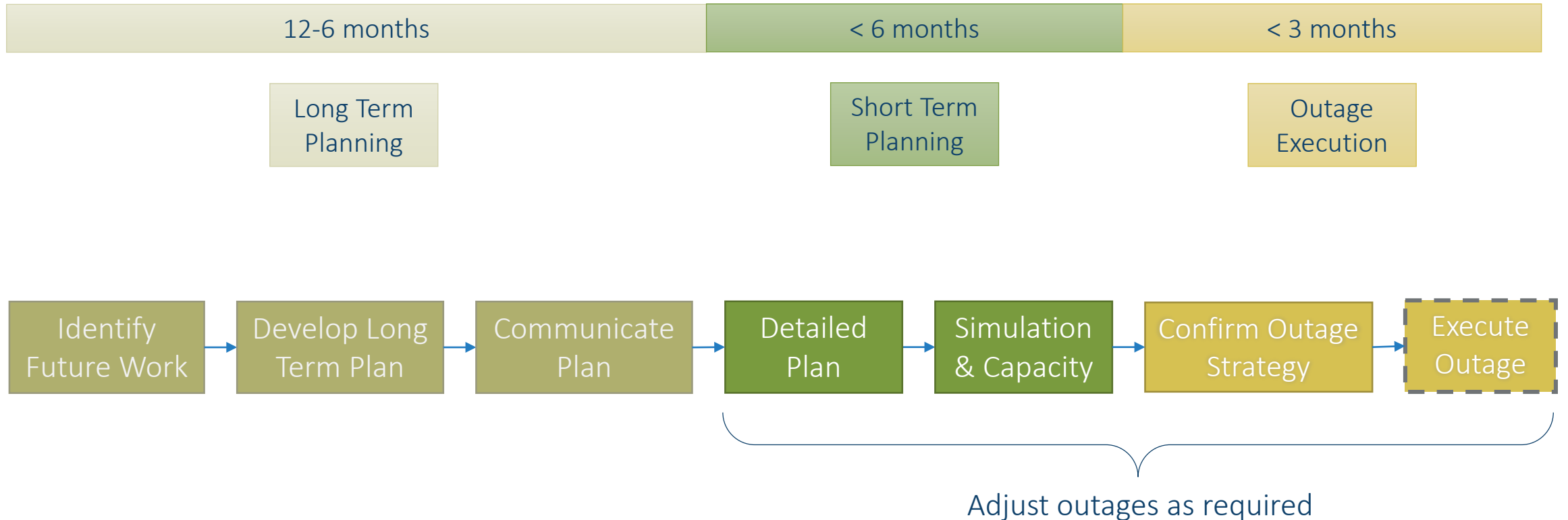
Educational Material



**TC Energy**



# Outage Management Process



Customer-provided Plant Turnaround information is leveraged through the outage planning process.

The Plant Turnaround Form can be found on [my.tccustomerexpress.com](http://my.tccustomerexpress.com) under 'Other Links' or [by clicking this link](#)

# Long Term Planning (12 – 6 months)

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## Identify Future Work

- Pipe Integrity
- Compression
- Measurement
- Capital Expansion



## Develop Long Term Plan

- Determine outage windows
- Bundle/overlap outages
  - Account for interconnect outages and plant turnarounds
- Model outages to determine operational setup and outage capability



## Communicate Plan

- November Customer Operations Meeting
- Add to Daily Operating Plan (impacts have been determined to potentially drive change to service availability)

# Short Term Planning (< 6 months)

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## Detailed Plan

- Confirm bundled and overlapping outages
- Identify new bundling opportunities
- Verify outage window
- Account for any new constraints



## Simulation and Capacity

- Hydraulic modelling
- Determine capacity and impact
- Optimize operating strategy and setup
  - Linepack requirements
  - Flow requirements
  - Pressure requirements
  - Resource requirements
  - Tool speeds (for inline inspections)
- Adjust outage as required
- Communicate changes to stakeholders (including updates to the Daily Operating Plan)

# Outage Execution (< 3 months)

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## Outage Strategy Confirmation

- Outage writeup
- Coordinate outage with region
- Optimize strategy as needed



## Adjust Service Availability - if required

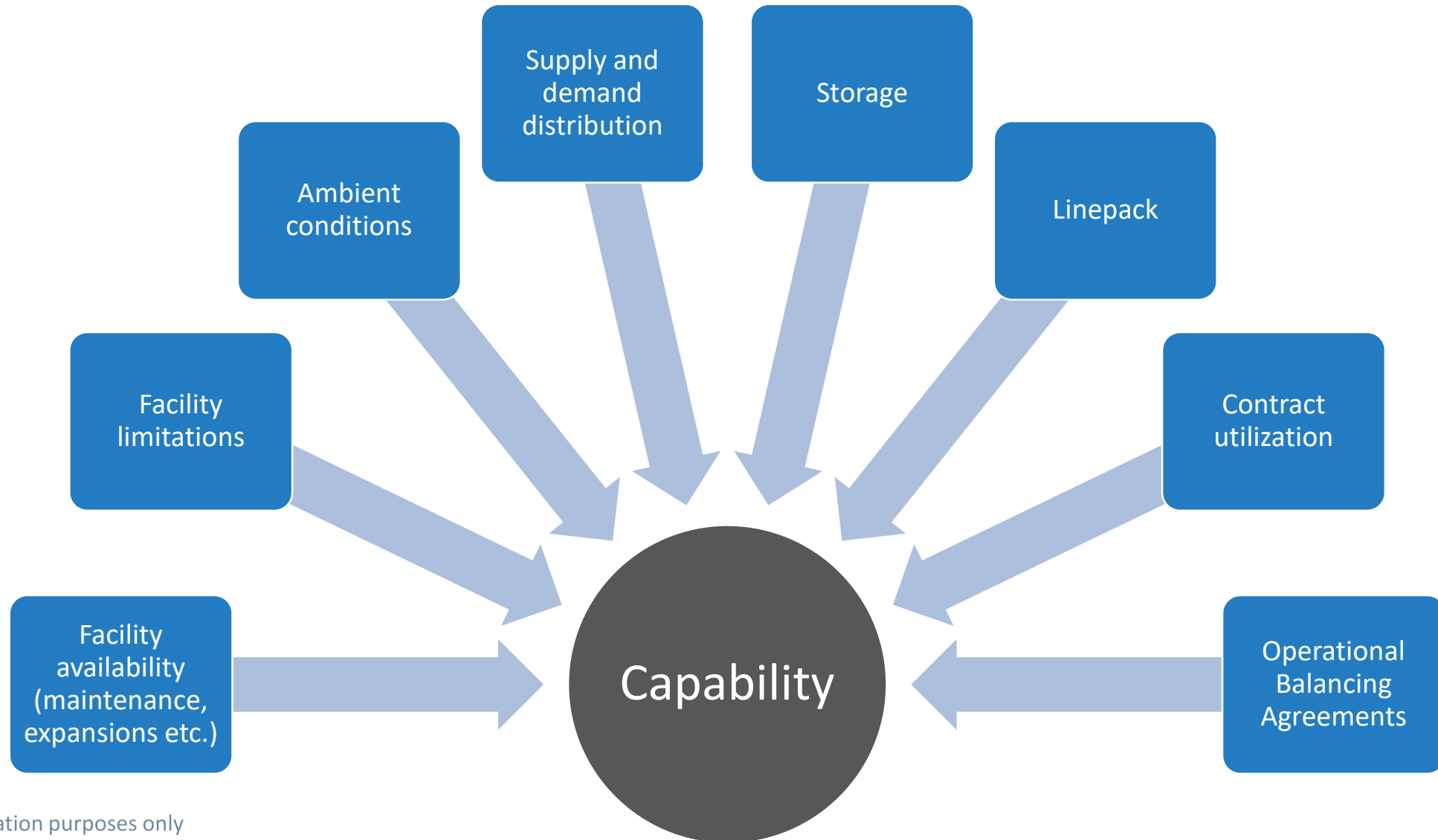
- Bulletin issued for Service Availability changes



## Execute Outage

- Review and manage system health during the outage to reduce impact

# Capability Determination | Primary Factors



# Contact information

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## Chuong Ngo

Manager, Operations Planning

[chuong\\_ngo@tcenergy.com](mailto:chuong_ngo@tcenergy.com)

403-920-6726

## Kevin D'Souza

Chair, NGTL/Foothills Customer Operations meetings

[kevin\\_dsouza@tcenergy.com](mailto:kevin_dsouza@tcenergy.com)

403-920-7915

## Matthew Ramsay

Supervisor, Operations Planning - West

[matthew\\_ramsay@tcenergy.com](mailto:matthew_ramsay@tcenergy.com)

403-920-6814

## Danvy Tran

Operations Planning - West

[danvy\\_tran@tcenergy.com](mailto:danvy_tran@tcenergy.com)

403-920-4474