

Strategic Directive 6: Innovation



Agenda

1) 2021 Workplan Review

2) TPU Innovation Program Charter

Vision

Goals

Principles

Process

Aspirations

Metrics

Reporting Mechanisms

3) TPU Innovation Use Case Repository



2021 Workplan Review

Industry disruptions are prompting utility innovation...



Customer expectations

Market shifts

Decarbonization

Renewables

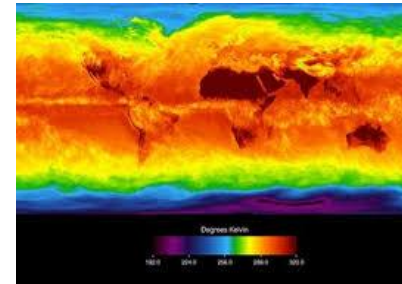
Cyber threats

Changing workforce



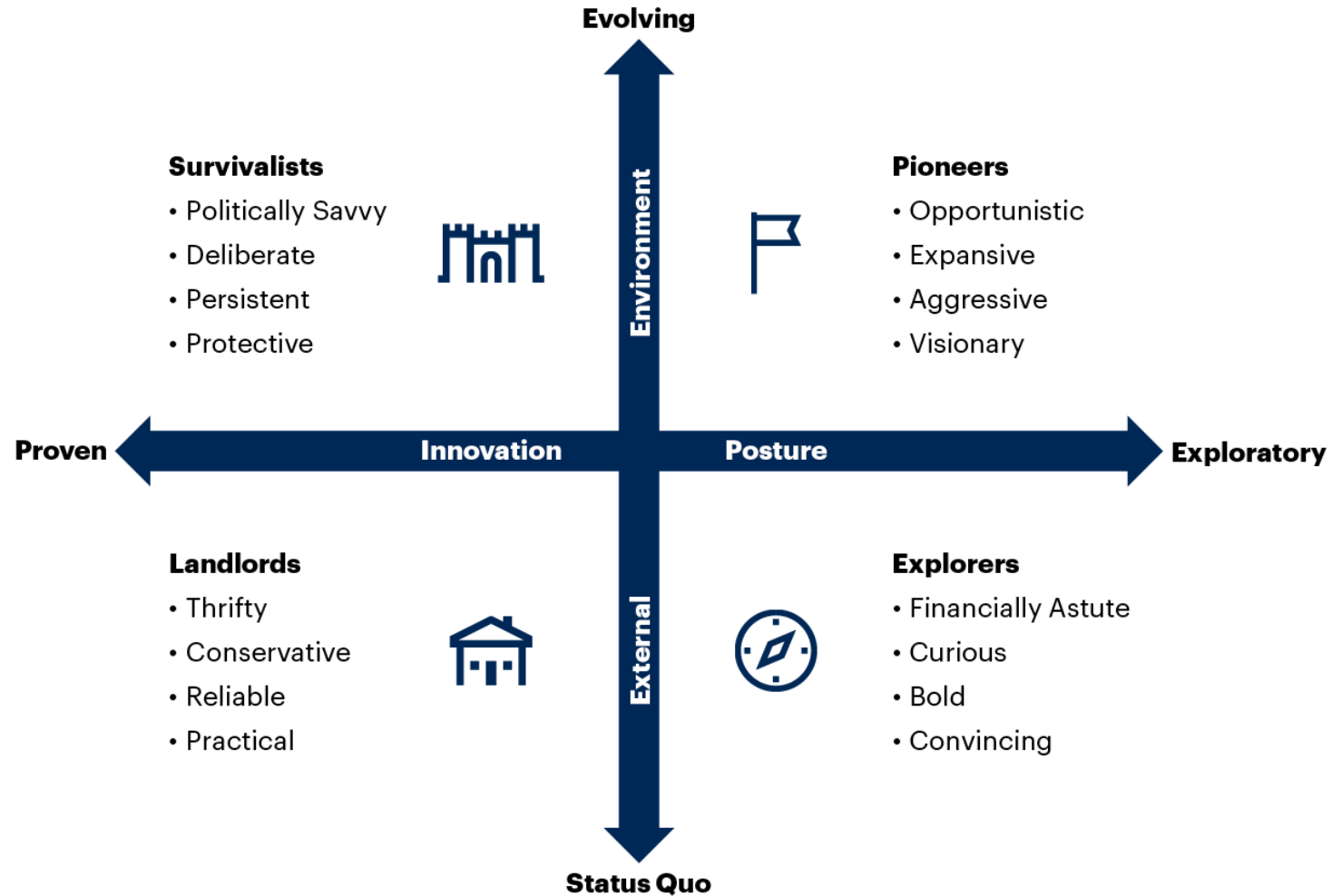
California ISO

CORONAVIRUS
(COVID-19)



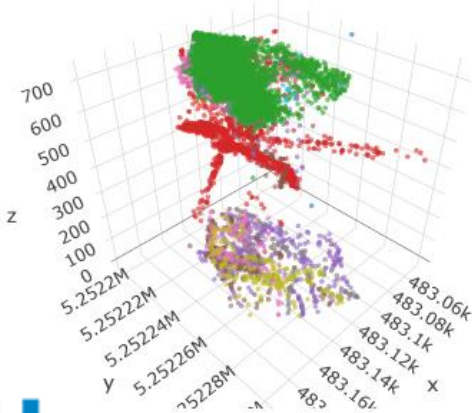
Utility innovation maturity benchmark

Utility Scenarios



Source: Gartner
745219_C

Shared innovation use cases across TPU...



TPU Innovation Program Charter

“Innovation” defined

The execution of new ideas that create value.

Innovation is characterized by:

- 1) Novelty (new ideas)
- 2) A useful outcome that generates value
- 3) Execution, not just exploration

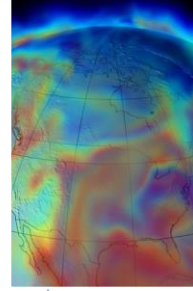


Hydro-Quebec's innovation institute

Innovation drivers at TPU



Affordability



Climate change



Economic development



Resilience



Resource adequacy

Vision

TPU faces complex challenges, including:

- *aging infrastructure,*
- *shifting workforce dynamics,*
- *uncertain sources of supply,*
- *changing regulatory requirements,*
- *dynamically changing markets,*
- *and rising customer expectations.*

TPU seeks to foster a culture of innovation to meet these challenges.

An innovative culture enables creativity, experimentation and incubation to better serve our customers, manage assets, enhance sustainability, finance investments and realize optimal utility performance.

Proposed TPU innovation advisors



Tellez, Joe
Power Section Manager



Norris, Clay
Power Section Manager



Pennington, Heather
Water Div Supt Deputy



Drennan, Daniel
Marketing & Development Manager



Braeger, Andrew
Power Section Asst Manager I



Hubbard, Matt
Power Engineer IV



McCabe, Daniel
Rail Chief Information/Financial Officer

Barriers to innovation



Rising costs



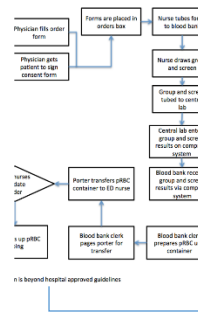
Staff time



Culture



Systems



Processes

Innovation program goals

Deliver both optimization and transformation benefits

Utility Optimization

Improve employee productivity

Enhance the employee experience

Enhance existing service offerings

Realize cost savings

Improve existing processes

Deliver operational improvements

Improve the customer experience

Utility Transformation

Deliver net new products

Deliver net new services

Deliver net new programs

Pilot new business models or service offerings

Principles

TPU will leverage the following principles to guide innovation investment or prioritization decisions.

Employee empowerment

We will empower employees to surface new ideas or propose new solutions that positively impact how we operate and deliver services.

Customer-value first

We will define and measure value from the viewpoint of the TPU customer.

Risk management

We will support an appropriate level of risk in our innovation portfolio and be open to exploring new and untraditional ideas.

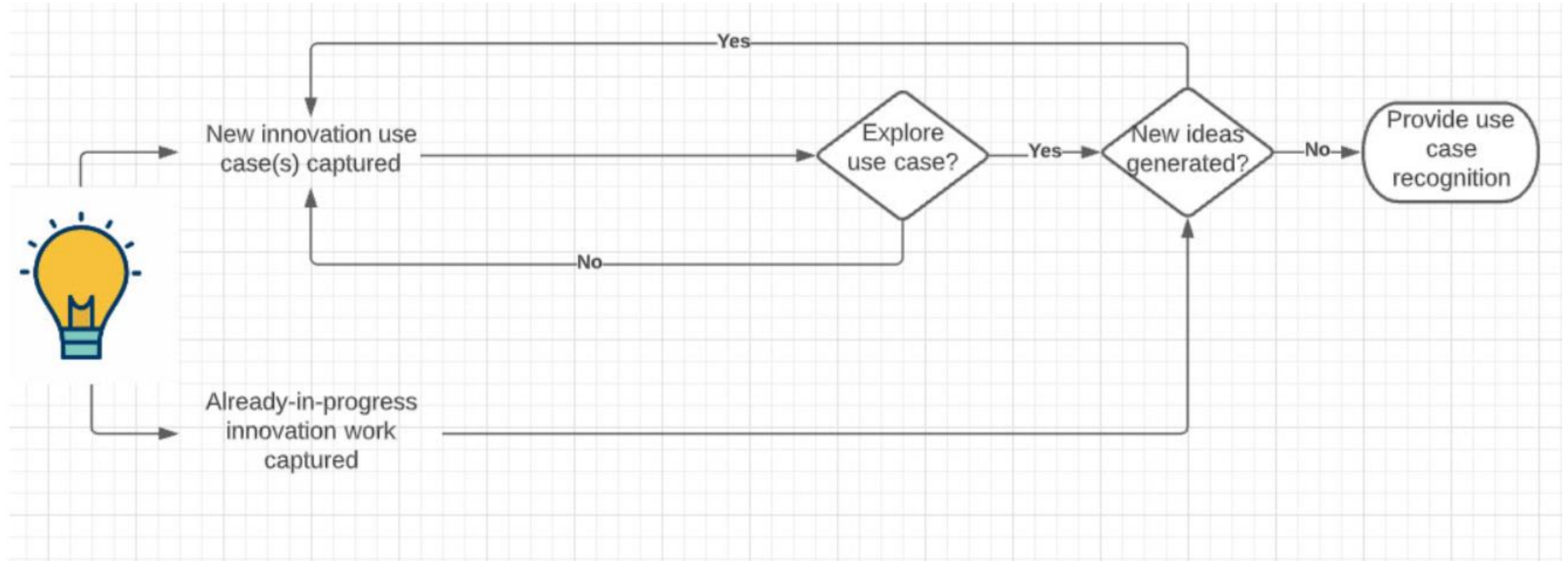
Market timing

We will balance patience with agility when considering appropriate timing and responding to market opportunities.

Operational excellence

We will promote innovation work that delivers operational benefit, such as cost savings, process improvement, lower rates, and service affordability.

Process



Aspirations

TPU staff will be recognized for their innovation contributions by TPU leadership and policymakers, including use case submission recognition and use case awards.

In order to effectively measure and report on the value of innovation, all utility innovation use cases will be captured in the TPU Innovation Use Case Repository.

Innovation use case work will be supported by the organization made up of employees from relevant domains that work collaboratively with leadership oversight.

We will support the further development of use cases that work well and have the courage to modify or eliminate ones that are not meeting their intended outcome.

Metrics and reporting

Culture Metrics - to be completed quarterly by the TPU innovation advisors

Creative Space - *On a ten-point scale, how much space is provided to staff to explore innovative work?*

Adaptability – *On a ten-point scale, what is TPU's ability to change its ways in the name of innovation?*

Process Metrics

Throughput - *Average time to complete/deliver an innovation use case*

Innovation Potential - *Number of new use cases submitted in a given time period*

Conversion Rate - *Number of new use case ideas that are turned into production concepts*

Outcome Metrics

Financial Benefit - *Total financial benefit of innovation use cases delivered*

Recognition - *How many use cases received internal or external recognition*

Potential leading indicator metrics

Customer Experience

Prepay – Customer participation in utility pay-in-advance payment service offerings

New Portal Registrations – Number of new customer portal registrations

Voice of the Customer – In-process customer feedback scores

Customer Journey Scores – Customer journey success measurements compared to existing process

Operational Excellence

Electrification Potential - Number of new electrification opportunities on deck or in progress

Economic Development Pipeline – Number of new business/growth leads/opportunities in the funnel

Culture

Creativity – Percentage of leaders trained in creativity, design thinking, and innovation

TPU Innovation Use Case Portfolio

Innovation use case elements

Title

Status (Backlog, In Progress, Deployed, Cancelled)

Opportunity or Problem Description

Start Date, End Date

Business Owner

Innovation Category (CX, enhanced service offering, new revenue or cost savings opportunity)

CX Score, Operational Benefit Score

Novelty (New for TPU, New for the industry, we've tried this before)

Scale (Small, medium, large)

Financial Benefit

Primary Work Area (Technical, office, field)



[Submit innovation use case](#)



[View innovation use cases](#)

Innovation Use Cases

See all

+

New

Share

Export to Excel

Use Cases by Status

> Title	Status	CX Score	Operational Be...	Start Date	Innovation Cat...	End Date
▼ Status : Backlog (8)						
Rate design for distributed energ...	Backlog	65	45	1/1/2022	Enhanced service offerings	3/1/2022
EV grid asset integration	Backlog	70	70	3/1/2022	Enhanced service offerings	5/1/2022
Alternative capital planning	Backlog	45	75	5/1/2022	Enhanced service offerings	6/1/2022

Emerging and in progress innovation use cases

Customer engagement portal

Water outage management

Smart water roadmap

Grid modernization working group

Emerging electrification programs

Positive train control

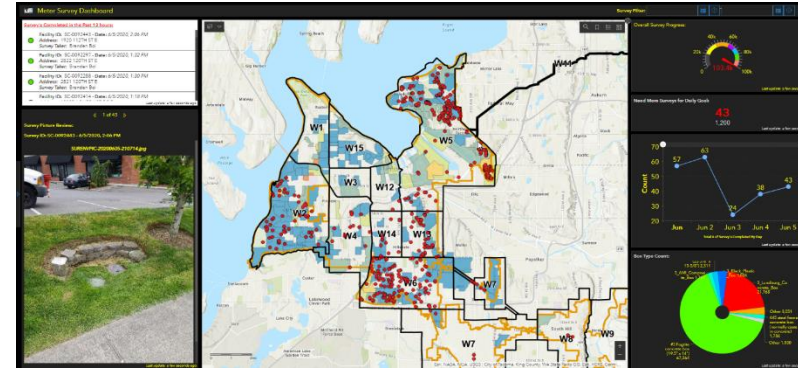
Enhanced hydrant rental process

Meter box survey tool

MIV audit capabilities

Vegetation management machine learning

Transformer load management analytics



Question & Response