

WECC HP Maturity Model Research Updates

NERC HP 2018





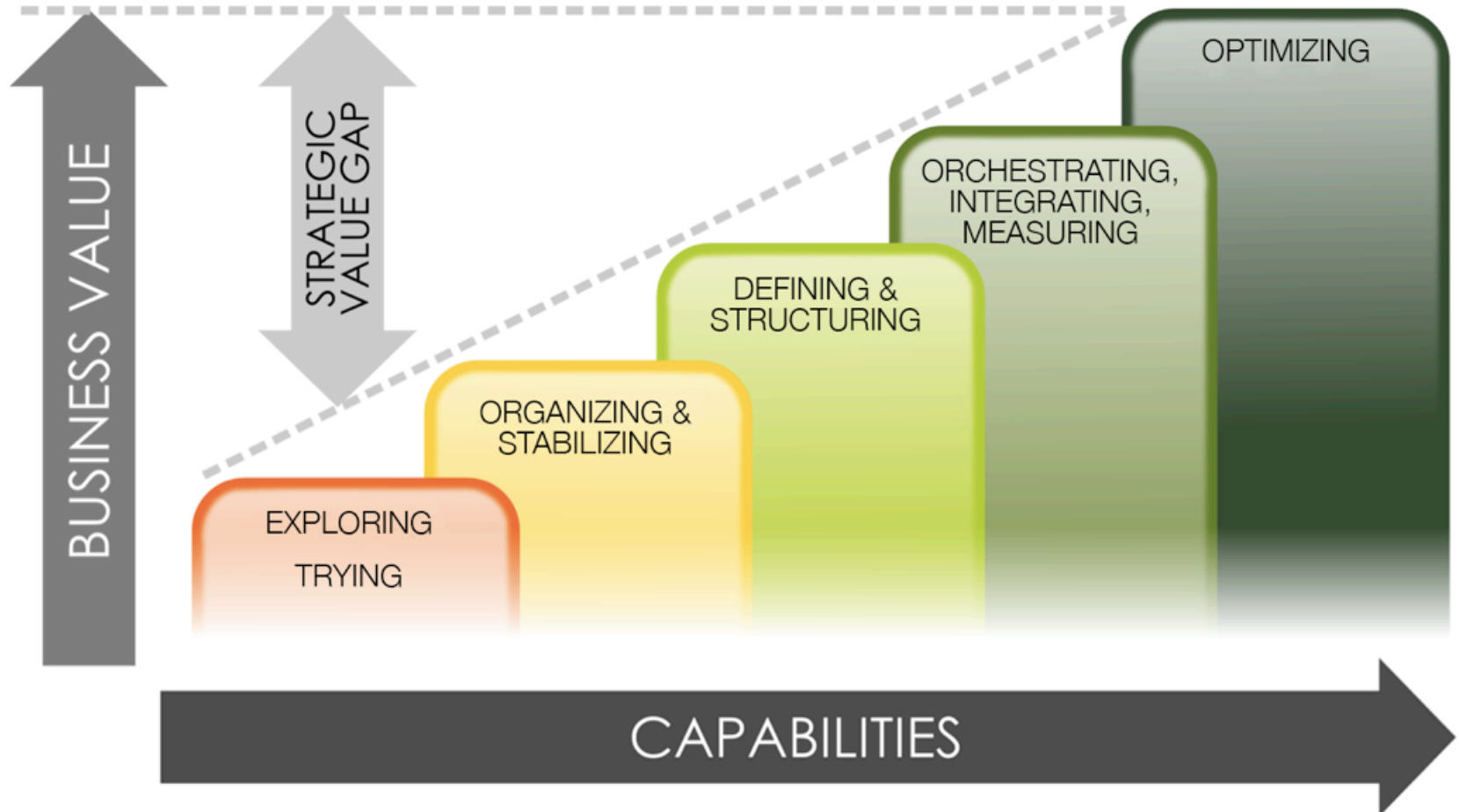
Breaking new ground!
HP Research

WECC HP Research Goal

To provide a **robust framework** for an organization to identify the desired level of human performance, and initiatives that should coexist, for the progression and desired level to be sustainable.

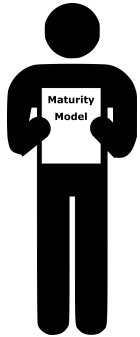
What is a maturity model?

Capabilities: Practices & Behaviors



From Electricity Subsector Cybersecurity Capability Maturity Model (C2M2)

Publicly available at Energy.gov



Perform Evaluation	Analyze Identified Gaps	Prioritize and Plan	Implement Plans
C2M2 Self-Evaluation Policies and Procedures	C2M2 Self-Evaluation Report Organizational Objectives	List of gaps and potential consequences Organizational constraints	Prioritized implementation plan
Workshop	Analyze gaps in organizations context Evaluate potential consequences and gaps	Identify actions to address gaps Cost-benefit analysis Prioritization of actions	Track progress to plan Reevaluate periodically or in response to changes
C2M2 Self-Evaluation Report	List of gaps and potential consequences	Prioritized implementation plan	Project tracking data

Research process

Write the research question



Review literature



Prepare research design



Collect data (n=29)



-> Analyze data; write report <-

Human Performance Definition

Optimizing behaviors to achieve goals, by focusing on the intersection of the complex system with the organization's people that are doing the work.

Are we on the same page with what HP means?

No definition.

Understanding where the Swiss cheese lines up.

Dealing with human element events.

Process of improvement.

It's safety.

Interruption of transmission or customer load that could have been prevented by people, better engineering design, worker knowledge, training, skill or work process, procedures or job planning.

Level 1

Respond to red flags from workers and trigger events.
Worst things first; add defenses.

Count errors; it's objective.

Use safety as platform for starting.

HP tools; method to prevent individual screw ups –
let them figure out how to use the tools.

Build trust and credibility as much as HP;
everybody won't be in the boat.

Drivers

Big event happened; no injury, could have been bad; leaders said, “We need HP.”

A director tired of trips, outages, stupid mistakes said figure this out.

NERC compliance & safety drove our interest in HP at the start.

“Well, we killed a bunch of people.”

How we got started

NATF Road Map.

Beta test in biz unit with identified org weakness.

Contractor rolled out HP to small group.

HR started with “speak up” surveys from employees.

Tools/methods unique to biz unit.

Pilot program for risks and controls.



Bridge from Level 1 to Level 2

Operational

- More than, “Put Tab A in Slot B.”
- Stay ahead of triggered events.
- 0 errors is not sustainable.
- Can't stay stuck in counting errors.
- Greater issues need to be solved.

Leadership/Business Case

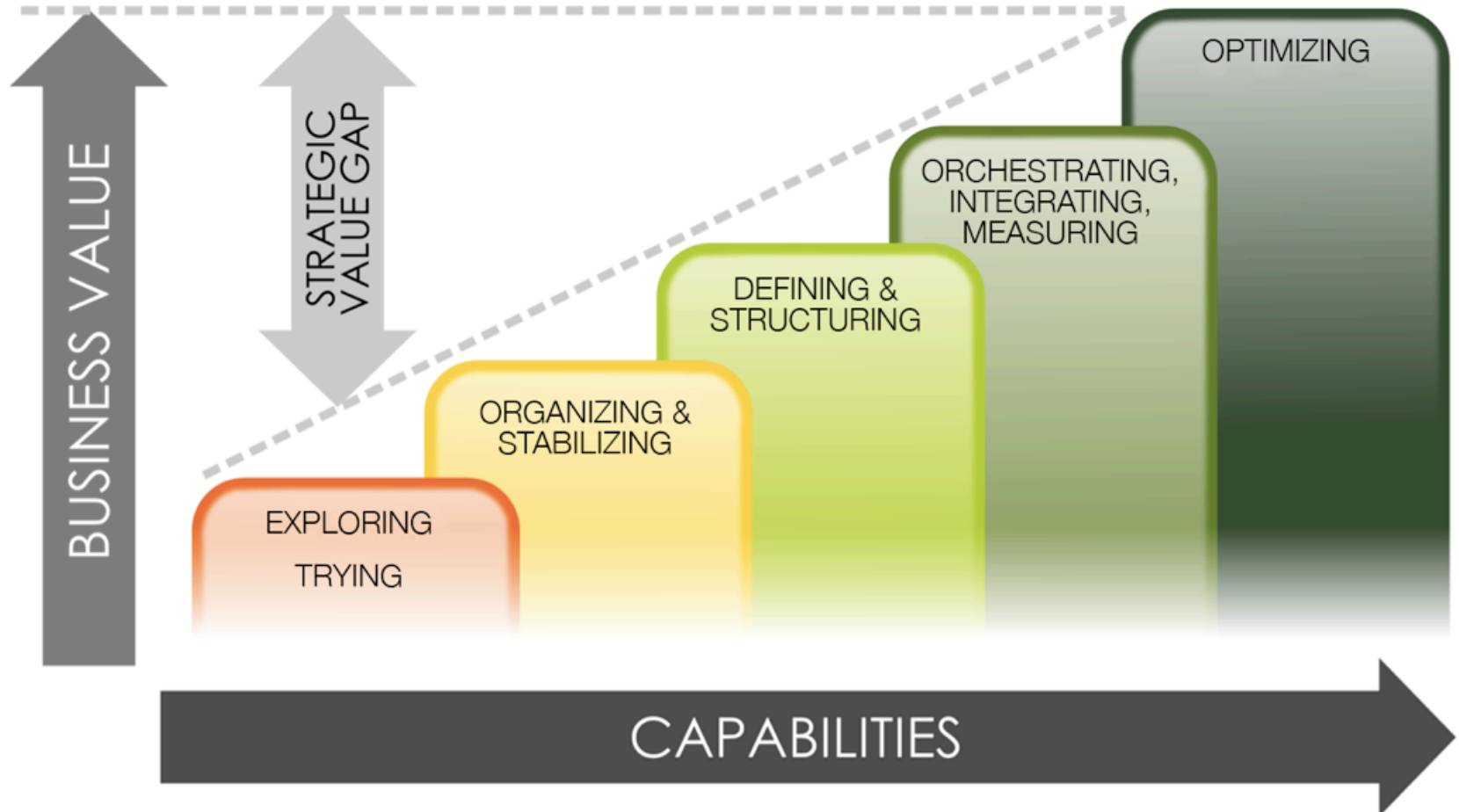
- Get past tools for individuals/check box.
- Obligation to do more.
- Executive HP education is key.
- Need reduction in events before we get support to move forward.
- More you try, the more leadership support you need.



Level 2: Organizing/Stabilizing Main Themes

Moving from sharp to blunt end
Event investigation
Applying lessons learned

Skip the middle; view the top



Step change at the highest level: Bridge between 4-5

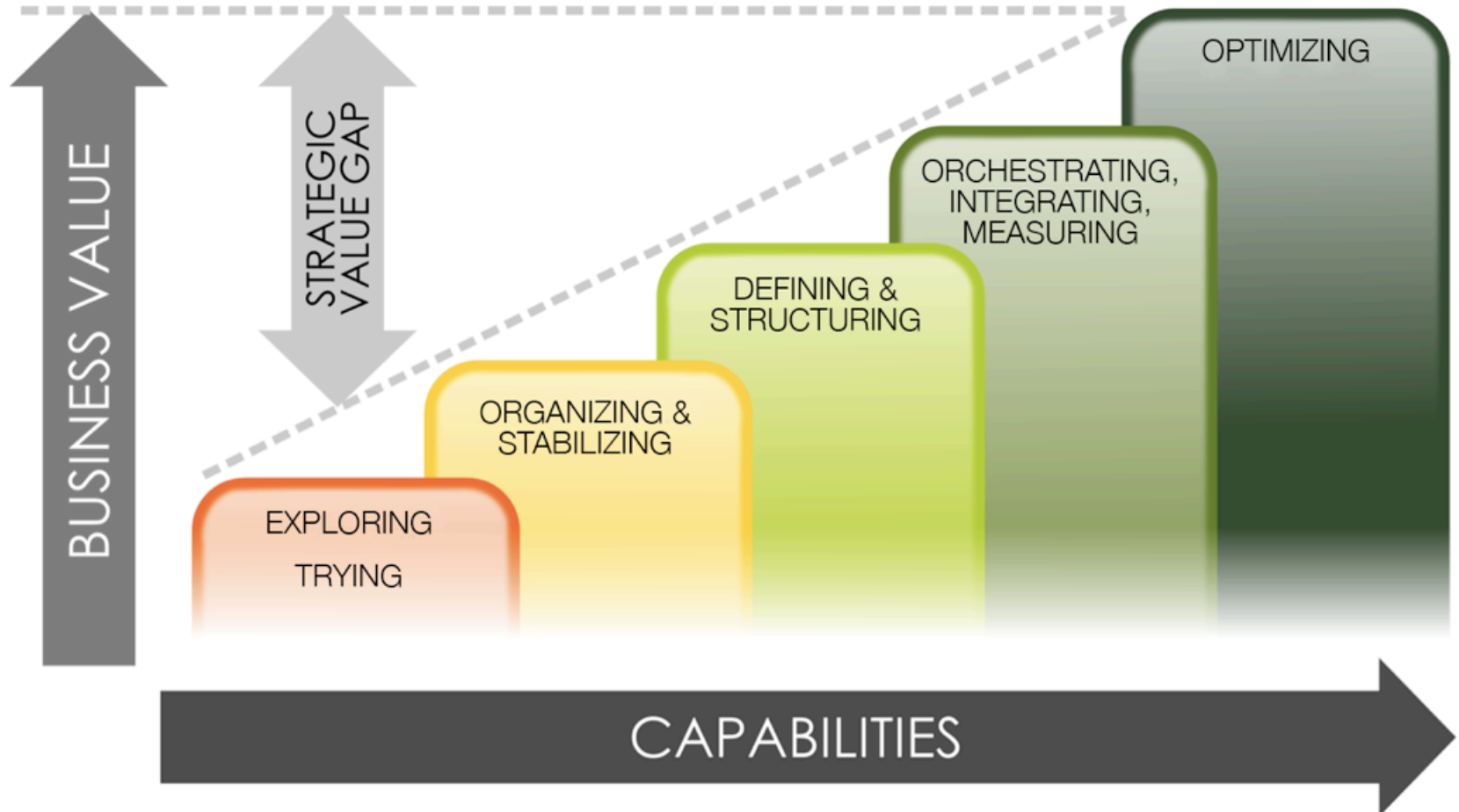
Desire for unified approach to develop and embrace a process, with everybody on board.

“We have the knowledge that HP can lead to good organizational performance; mishandling it can lead to unhealthy performance.”

Level 5: Optimizing

- Top down strategy, aligning HP practices with top quartile performance goals
- Organizational learning – constant state, & at all levels
- “HP fits within the broad perspective of our business.”
- “Clear expectations, clear communications, and enterprise wide, marching the same HP path and explaining why.”

Letting HP happen -> Helping HP happen ->
Making HP happen



What's next?

Complete this analysis & research report.
Write white paper for WECC.
Continue the research industry wide.

You can be part of this awesome work!

Opportunities for research & application:

- Pilot projects in your organization
- Participating in research surveys as the work continues
- Testing tools and application

WECC HPWG | WECC HPWG MM Task Force | McColl School of Business
Interviewees
Research Assistants
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thank you



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