



# **Dow's 2025 Nature Goal: Scaling Corporate Decisions and Culture in Valuing Nature**

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**Dec 9, 2016**

# Agenda

Safety Moment

Top-Down Goal

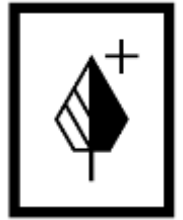
Bottom-Up Culture Change

Case Study: Lake Jackson Pump Station

Direction Forward



# Safety Moment – Distractions



## Common Distractions

- Cell Phone
- Conversations
- Multi Tasking
- Lost in Thought



## Hazards

- Poor Work and/or Communication
- Slips, Trips, and Falls
- Vehicle and/or Pedestrian Accidents

Be where you are!!!



# Top-Down Goal



Image from:  
<http://www.washington.edu/news/2014/11/05/incorporate-more-voices-to-loosen-conservation-gridlock-scientists-urge/>



“Environmental conservation is not just good for nature – it is good for business. By integrating the value of biodiversity and ecosystem services into their strategic plans, companies can incorporate sustainability as an adjective into everything they do, delivering positive growth for enterprise and planet alike.”

- Andrew Liveris at announcement of Dow's collaboration with The Nature Conservancy in 2011

# 2025 Sustainability Goals



## Leading the Blueprint

Dow leads in developing a societal blueprint that integrates public policy solutions, science and technology, and value chain innovation to facilitate the transition to a sustainable planet and society.



## Delivering Breakthrough Innovations

Dow delivers breakthrough sustainable chemistry innovations that advance the well-being of humanity.



## Advancing a Circular Economy

Dow advances a circular economy by delivering solutions to close the resource loops in key markets.



## Valuing Nature

Dow applies a business decision process that values nature, which will deliver business value and natural capital value through projects that are good for business and good for ecosystems.



## Increasing Confidence in Chemical Technology

Dow increases confidence in the safe use of chemical technology through transparency, dialogue, unprecedented collaboration, research and our own actions.



**Engaging Employees for Impact** Dow people worldwide directly apply their passion and expertise to advance the well-being of people and the planet.

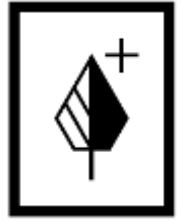


## World-Leading Operations Performance

Dow maintains world-leading operations performance in natural resource efficiency, environment, health and safety.



# Dow's 2025 Valuing Nature Goal



Our Goal is to apply a business decision process that takes into consideration the value of nature. Dow will deliver business value and natural capital value through projects that are better for business and nature.

- By 2025, Dow will **identify \$1B in value through projects that are good for business and good for ecosystems.**
- By 2020, **all R&D, capital and real estate projects at Dow will be screened** using Nature's Future Value (NFV) assessments, a tool we developed with The Nature Conservancy to measure the value of ecosystem services.



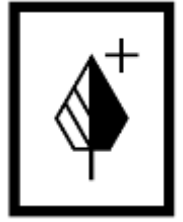
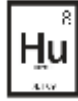


# Bottom-Up Culture Change

Photo from: [assets.inhabitat.com](https://assets.inhabitat.com)



# Nature Goal Team



**Paul Dean** Vice President, Engineering Solutions & Technology Centers



**Mary Draves** Global Director, Remediation and Restoration  
Global Director, Environmental Operations and Technology Center



**Tommy Polzin** Project Manager / Land



**France Guertin** Environmental TC



**Todd Guidry** Engineering TC



**Jarod Davis** Operations Regulatory

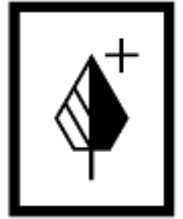


**Research & Development** Future

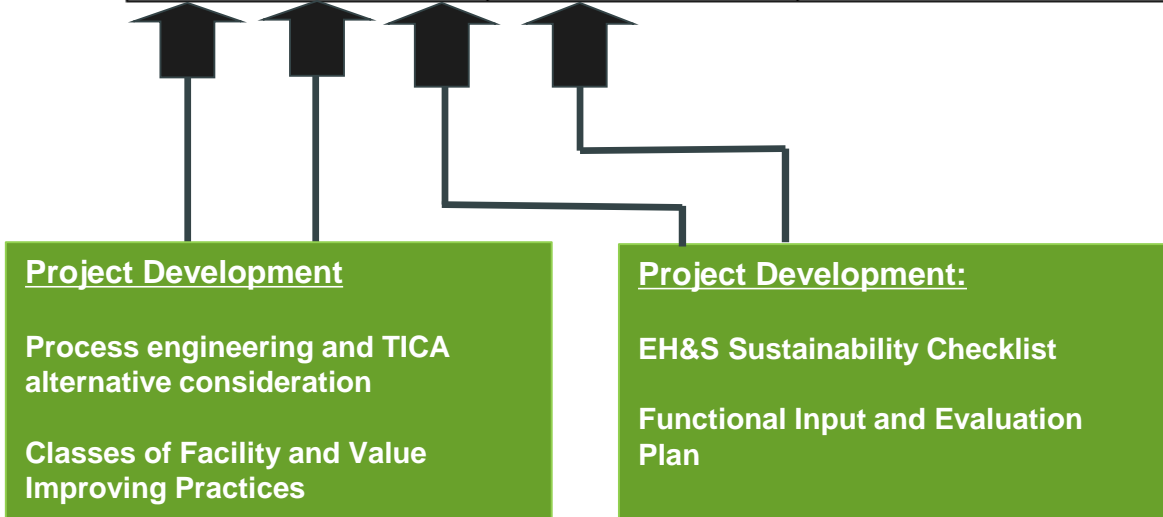


# Process Changes

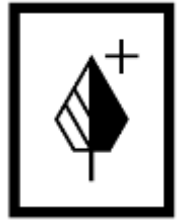
## Global Project Management




Front End Loading (FEL) (FEED in Industry)		Detailed Design	Construction	Commissioning & Start-up
Stage 1 Project Identification	Stage 2 Project Definition	Stage 3 Project Design & Construction		Stage 4 Startup & Closure



# Project Screening



**2025 Sustainability Goal: Valuing Nature**

 We will apply a business decision process that values nature. We will deliver business value and natural capital value through projects that are good for business and good for ecosystems.

**Project Description**

\* Required field

Project Name\*

Project Site\*


Project Manager Name\*

Type of Project (for Valuing Nature Goal)\*  
 Engineering Related Technology  
 Process Improvement - Scale Up  
 Process Improvement - Scale Down

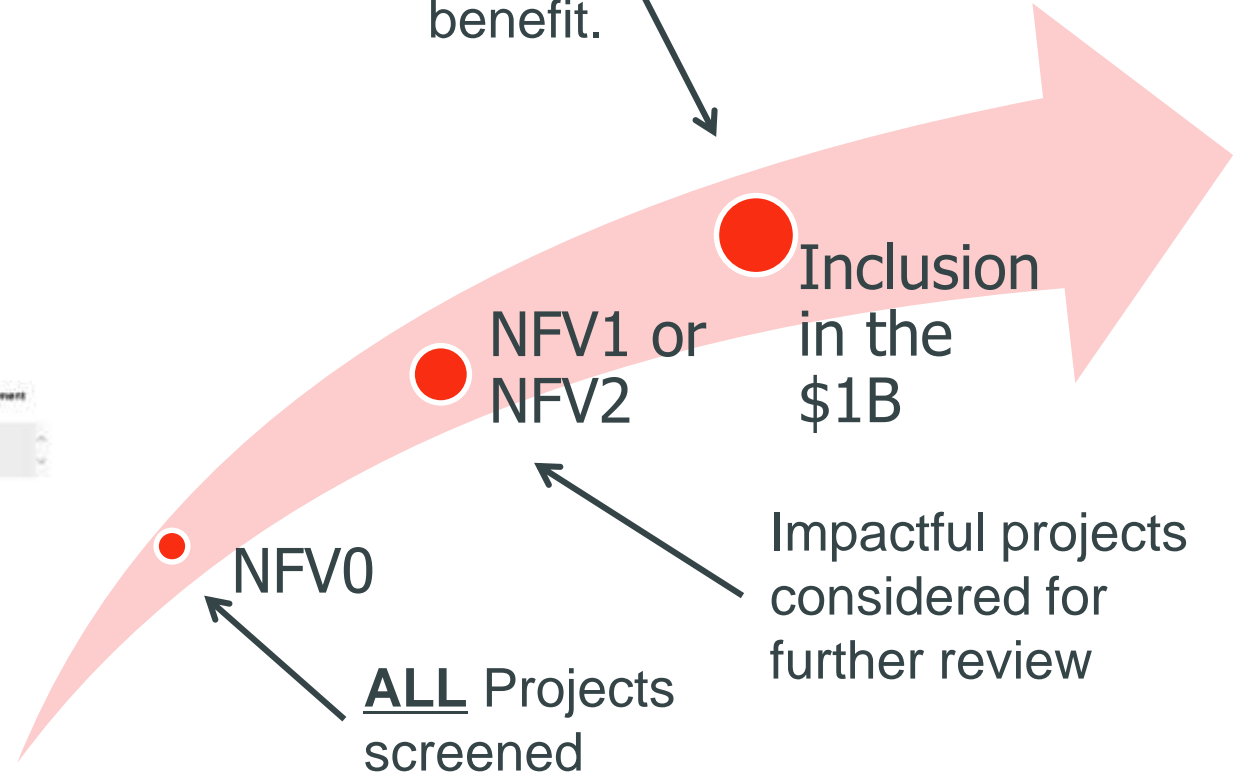
Project Driver\*  
 Regulatory  
 Cost Savings  
 Revenue

Project Boundary\*

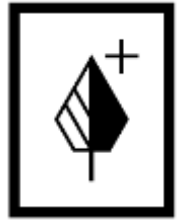
**Nature Screen**

Initial Screening Questions	Action	Project Comment
Will the proposed project impact the consumption of energy and/or materials including fresh water in the facility by more than 12%? 	<input type="text" value="SELECT ANSWER"/>	<input type="text"/>

Best projects included in goal benefit.



# Integrated Development



## Tools

ESII

NPV

Most Effective Technology (MET)

Design Capacity

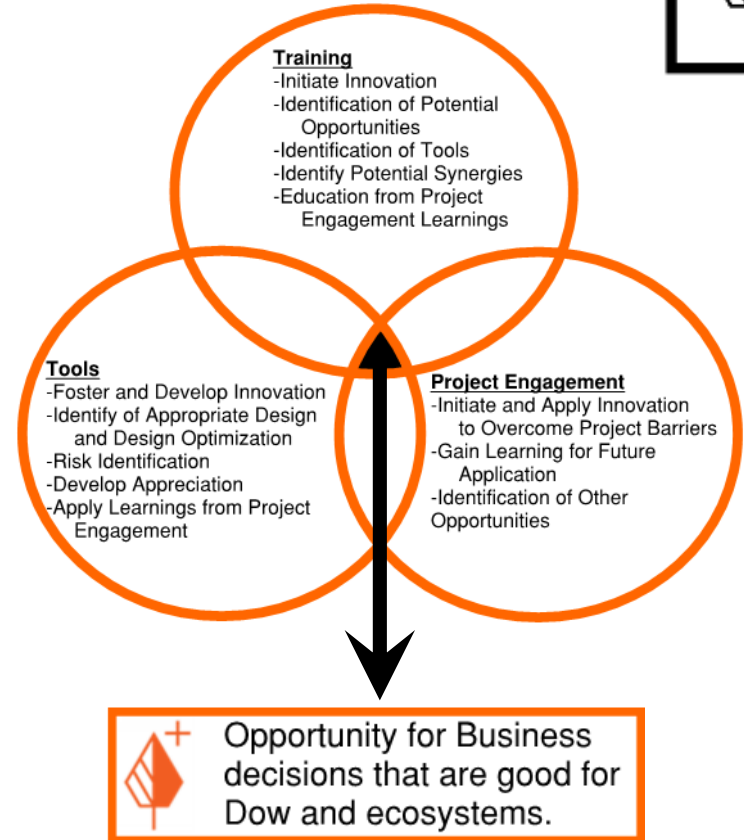
## Training

External Engagement

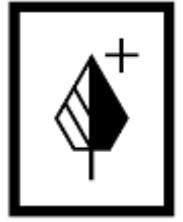
## Project Engagement

Education

Workshops



# Case Study: Lake Jackson Pump Station



Summary: Project involved updating an existing raw water pump station due to regulatory drivers and aging infrastructure

## Opportunities

- Sustainable Landscaping

- Erosion Control

## Challenges

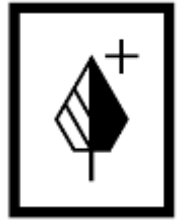
- Late Stage Involvement

- Bigger is better - Hard Armor vs Soft Armor

- Contractor Experience and Capabilities



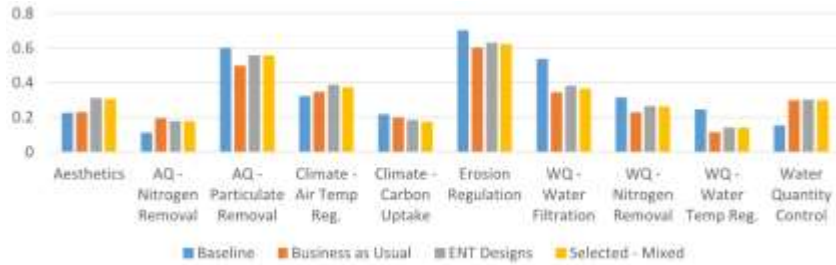
# Case Study: Lake Jackson Pump Station



## Value Identified

Erosion Control - 16% Capex

Sustainable Landscaping - 14% O&M and Capex



## Learnings

Early Engagement

Technical Support and Education

Nature Based Technologies can reduce Upfront Costs

Every inch counts!!



# Direction Forward

Project Screening

Implement Learnings

Technical Acumen Development

Mixed Project Portfolio (Big and small)

Regional Champions

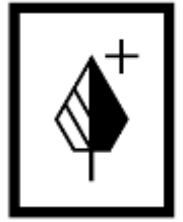
Key Projects

Research & Development

Incentives



# Nature Moment – Mangroves



## Nature's Living Sea Wall



Source:  
<http://http://ocean.si.edu/mangroves>



Source:  
<http://mangroveactionproject.org>

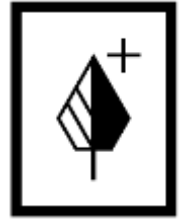


Source:  
UNEP World Conservation Monitoring Centre and  
International Society for Mangrove Ecosystems NGM Maps  
Copy Right: National Geographic Magazine



## Paving the Way

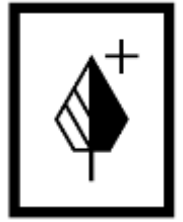
Natural capital decision-making across a global business of this scale has never been done before.




*Most all creative endeavors are somewhat unpredictable. They often seem ambiguous, hit-or-miss, trial and error. And unless people have a high tolerance for ambiguity and get their security from integrity to principles and inner values they find themselves unnerving and unpleasant to be involved in highly creative enterprises.*

*- Stephen Covey*

# Questions





## Redefining the Role of Business in Society.

Sustainability is our commitment. This is how our employees make it happen.

#DOW2025

