



U.S. ARMY

The "Push" and "Pull" of Innovation

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of Engineers



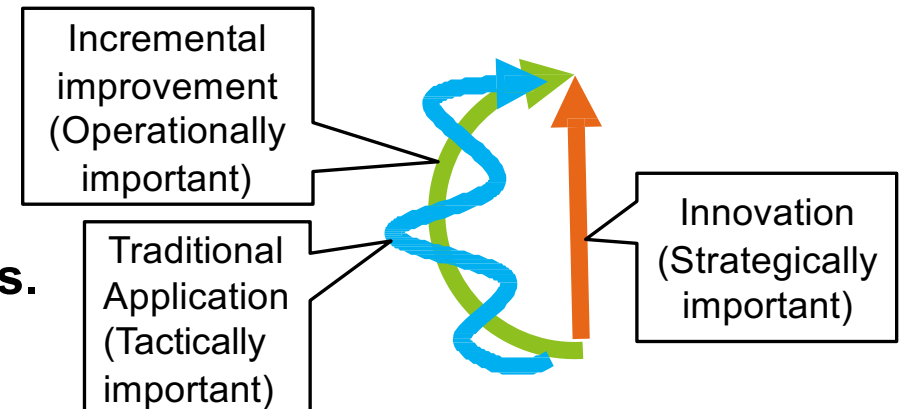
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DISCOVER | DEVELOP | DELIVER

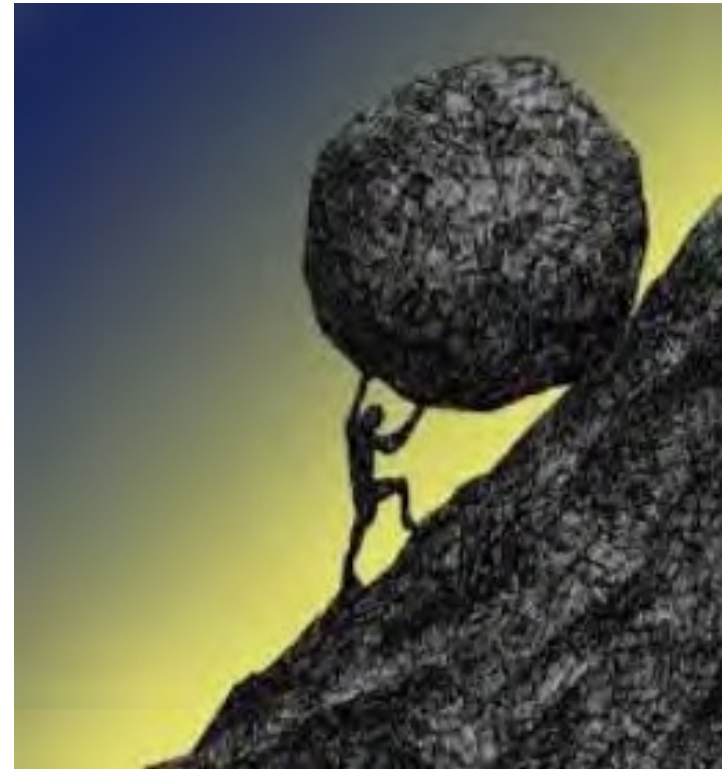
What is innovation?

- Application of **disruptive measures** to the traditional, which make **profound leap-ahead achievements** possible, for reaching **stretch goal life cycle systems performance objectives**.
- Results in **outcomes not otherwise currently imaginable and feasible** to act upon, pursuant to established or new decision rules.
- **Disruptive measures** are defined as:
 - Creatively re-purposed traditional;
 - Newly developed as available; and
 - Value-laden gap-closing future pursuits.
- **Innovation ≠ Incremental improvement!**



What are the major obstacles to innovation?

- **Organizational leadership posture.**
- **Budget and time constraints.**
- **Workforce and / or stakeholder risk aversion.**
- **Understanding and valuing the benefits.**
- **Expectations / permission to innovate.**
- **Embrace and tireless pursuit of innovation.**

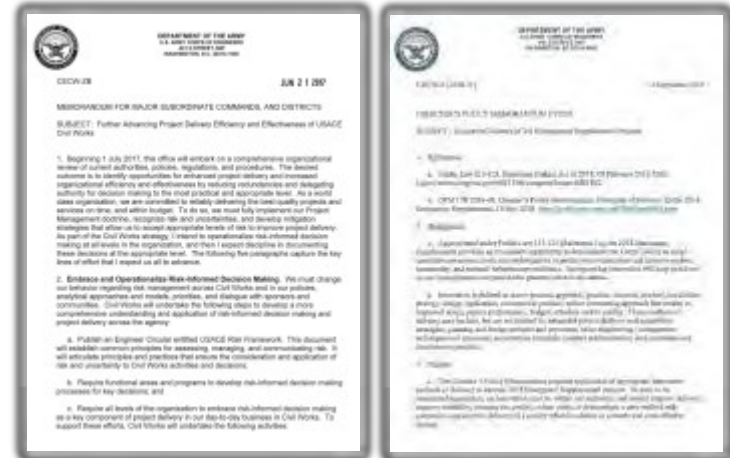


What are the key factors that facilitate innovation?

- **Shared vision value proposition and mandate for innovation and risk taking.**
- **Enterprise priorities and incentives in programming, technical guidance, and resourcing, to innovate.**
- **Catalysts: Strategy, championship, action plan, and high performing culture.**
- **Employee performance elements, standards, and incentives for innovation.**

High performing culture → **Espirit de Corps:**

- Technical best
- “All in” every day
- Team player
- Innovate in everything



- DPM CW (21 JUN 17): Further Advancing Project Delivery Efficiency and Effectiveness of USACE CW
- DPM CW 2018-09 (3 MAY 18): Improving Efficiency and Effectiveness in USACE Civil Works Project Delivery
- DPM CW 2018-09 (16 JUL 18): Principals of BBA 18 Delivery
- ER 5-1-11, PDBP (31 JUL 18): The “what” of project delivery
- SemoNOTE #15 (1 AUG 18): PDBP Refresh
- DPM CW 2018-11 (14 SEP 18): Innovative delivery of BBA 18 projects

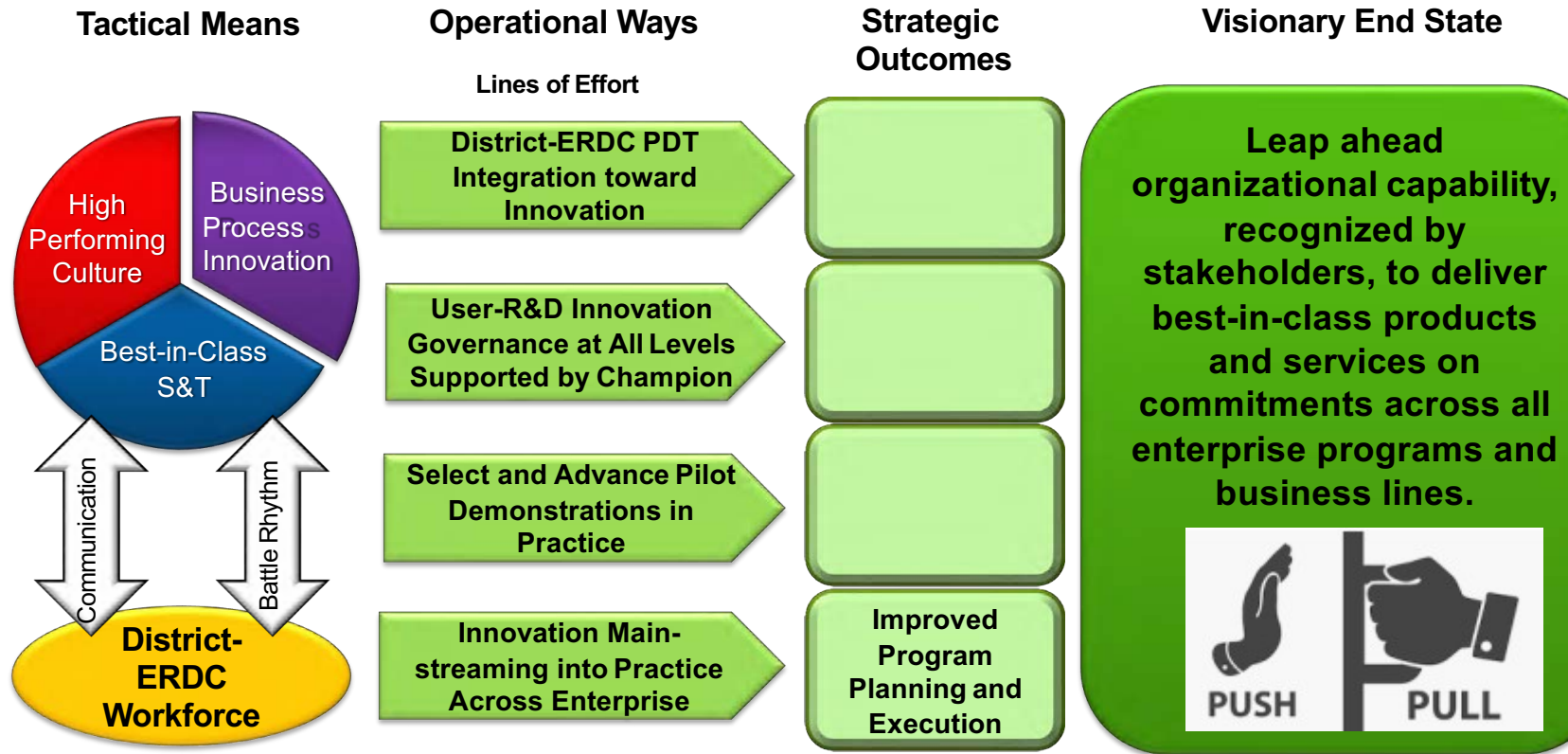
How can we measure innovation*?

- Improved product quality, resulting in increased achievement of project performance objectives.
- Reduced levels of effort, minimizing staffing and external acquisition needs.
- Lowered product development execution risks.
- Shortened timeframes to project delivery.
- Reduced project costs.
- Increased available spectrum and valuations of project benefits.



*** Compared to traditional practices**

How can R&D-push and user-pull be coordinated?



What are the key challenges and opportunities for USACE?

Challenges:

- **More progress on policies and practices to promote innovation.**
- **Periods of feast (expedite delivery, little time to innovate) and famine (can't afford innovation, just deliver basics).**
- **Lack of innovation champion in USACE, e.g., Innovation Center of Expertise (ICX).**



Opportunities:

- **Improved employee and organizational capabilities and achievement through encouragement to innovate.**
- **Greater rates of achieving project authorizations / appropriations using full spectrum of benefits (e.g., NED, RED, NER, and OSE).**
- **Increased USACE demonstration of V2N via CW IWRM, improving future conditions and opportunities to serve.**