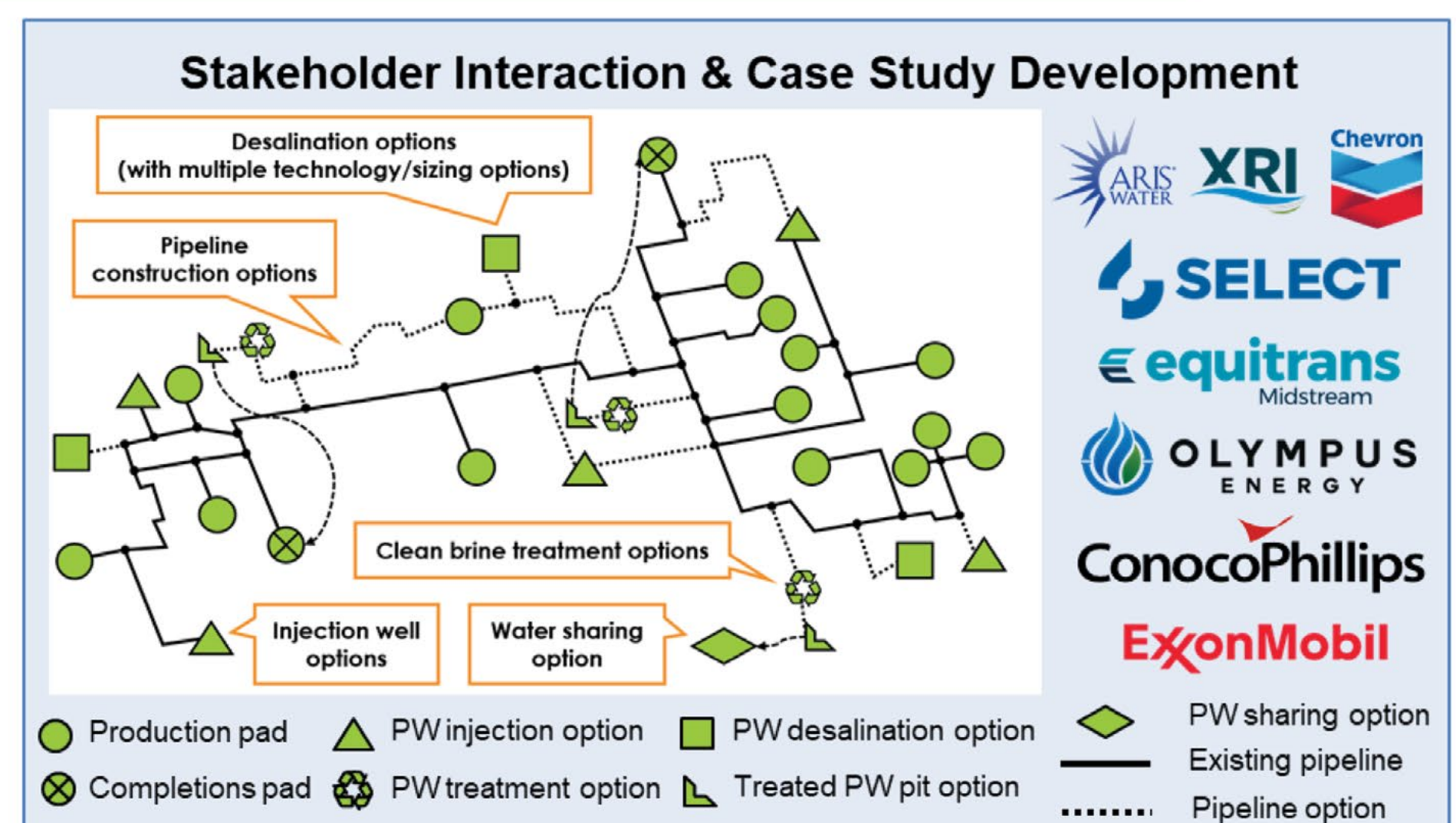
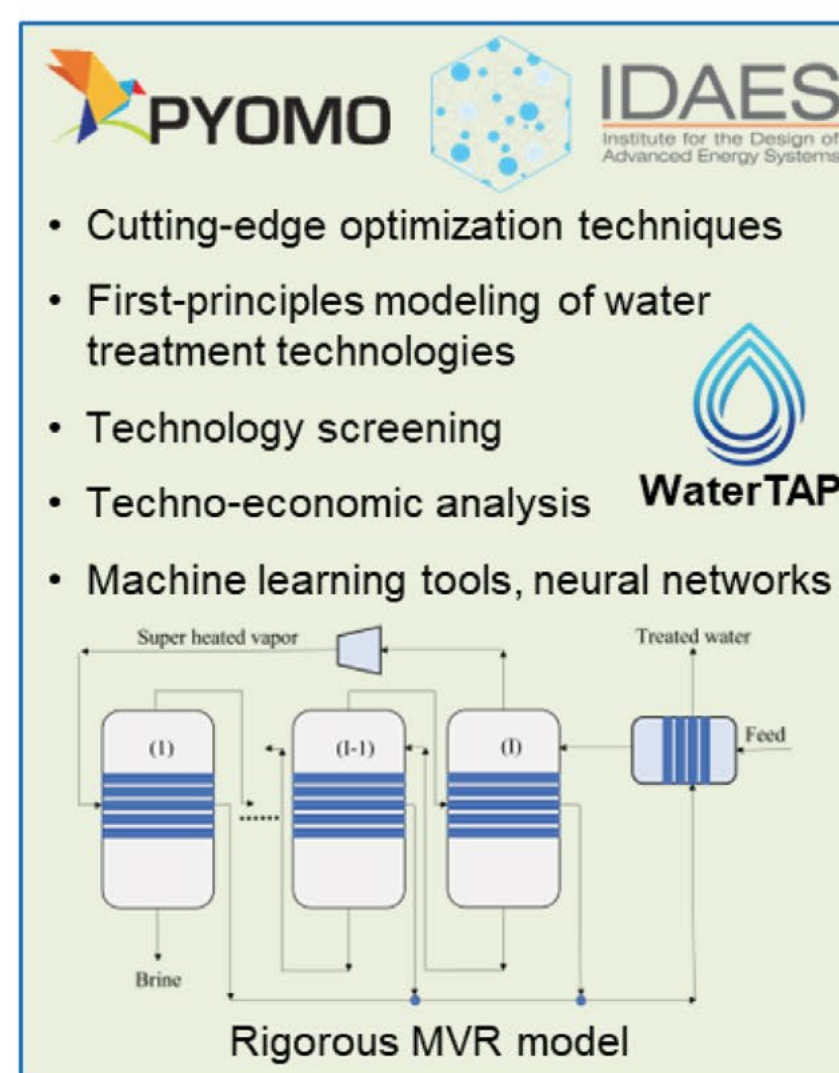
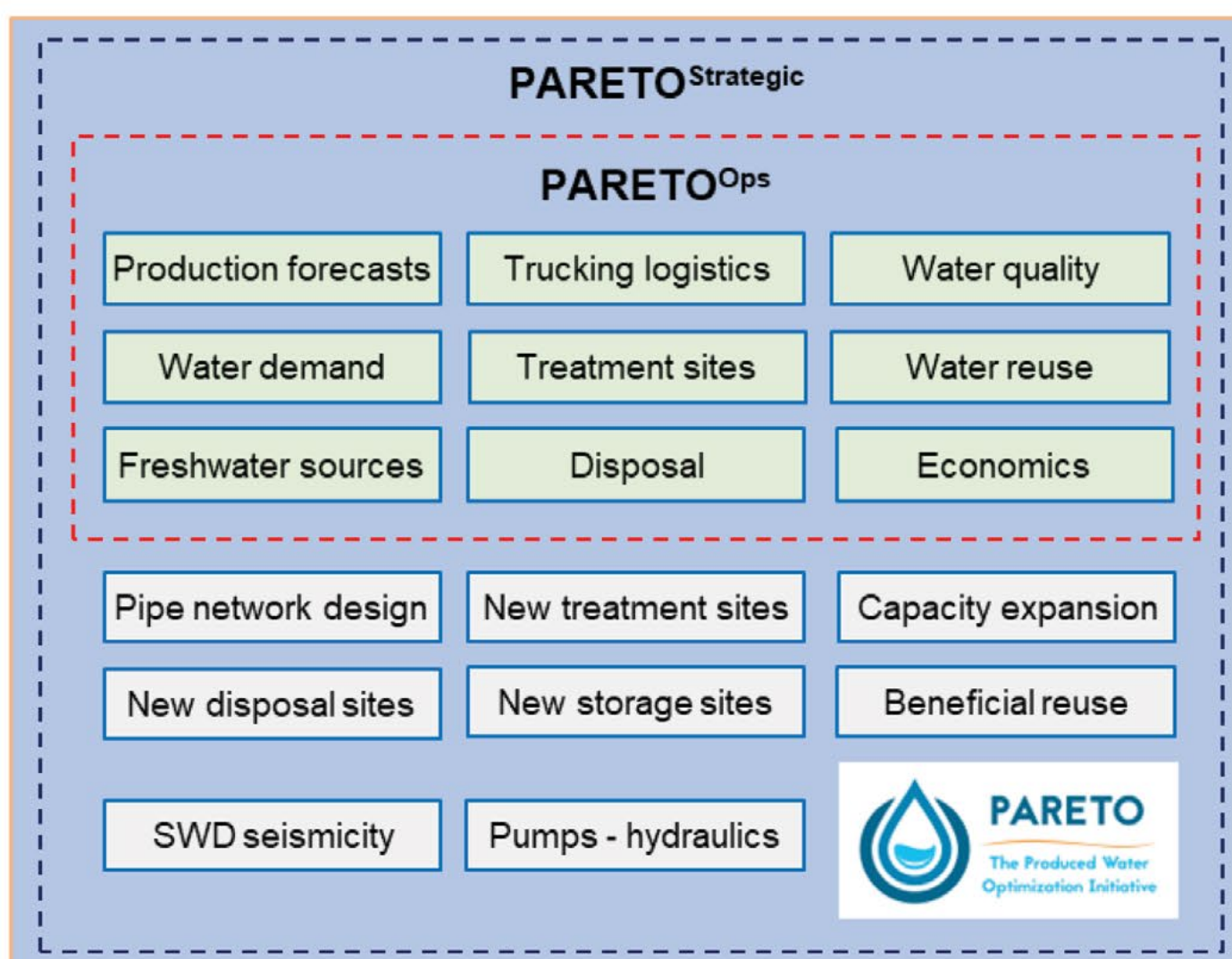
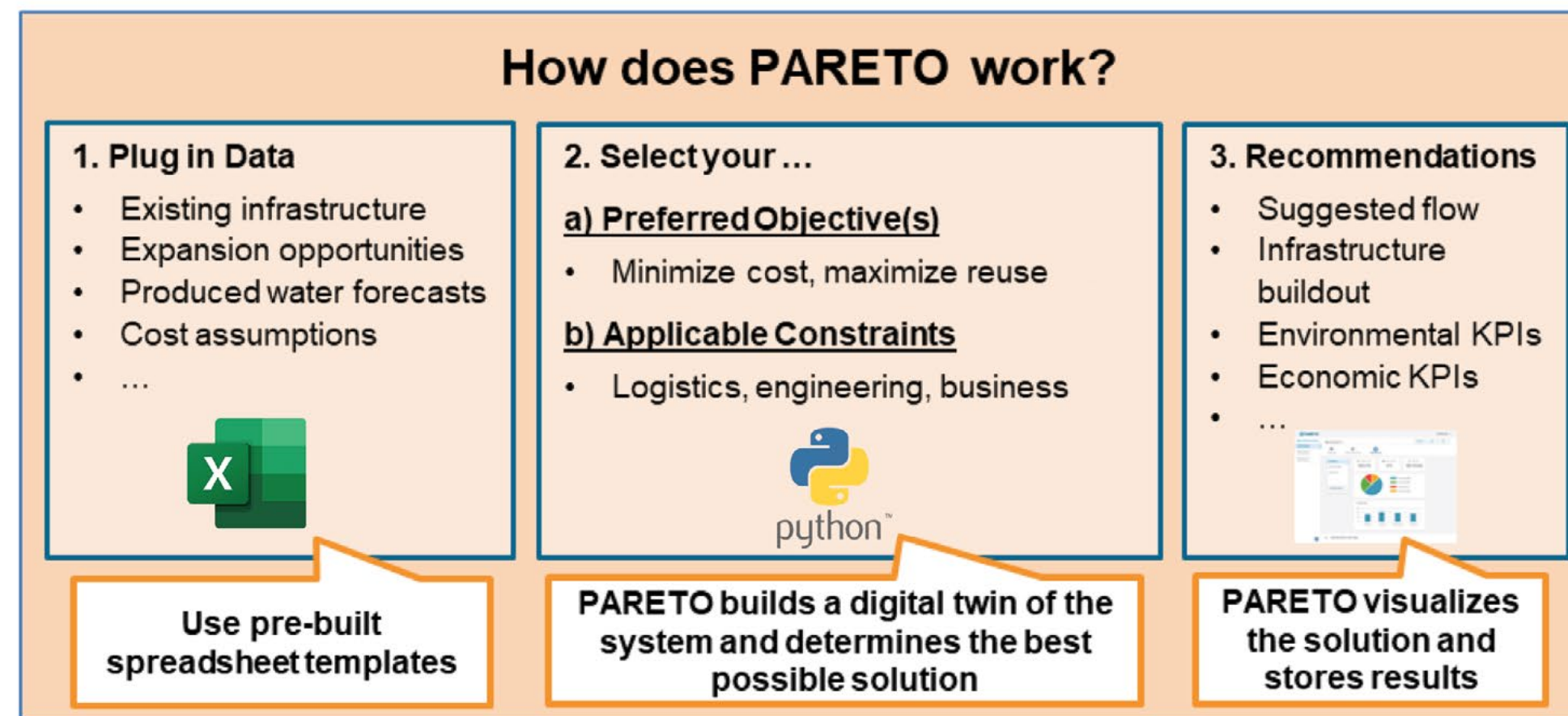
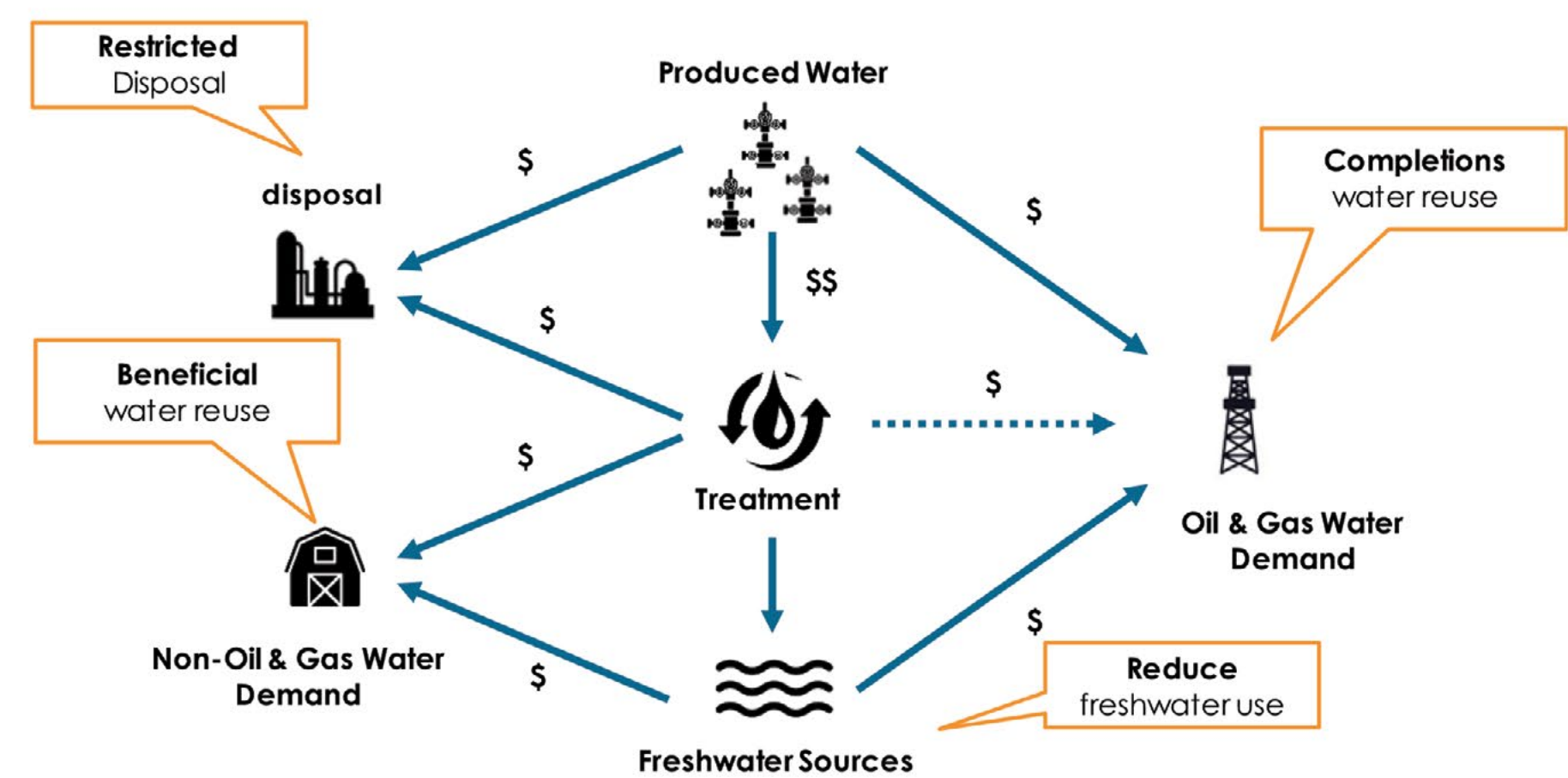


# PARETO: Minimizing Produced Water Costs and Environmental Impact

NETL's decision-support software "PARETO" advances strategic pathways for the treatment and reuse of produced water that go beyond subsurface injection.



An overview of the PARETO produced water optimization framework.

PARETO is DOE's produced water optimization framework, designed to identify cost-effective, sustainable management, treatment and beneficial reuse strategies in support of oil and gas operations.

- PARETO provides recommendations to maximize the effectiveness of produced water infrastructure buildout.
- PARETO offers modules for beneficial reuse, pipeline hydraulics, water quality management, subsurface risk mitigation and more.
- PARETO source code is available free and open-source on GitHub, and as a standalone program with a graphical user interface. In total, PARETO has more than 700 downloads with a growing user base.
- Project PARETO maintains a stakeholder board of over 30 members representing the oil and gas industry whose feedback and input have shaped PARETO software throughout its development.
- Two private sector entities are currently commercializing PARETO; projected annual revenues are \$16M per year over the coming decade; translates into a return on taxpayer investment 2,400%!

DOE PROGRAM

**Advanced Remediation Technologies**

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