



# Cook Legacy February eNews

## Resources in this month's eNews:

- [Message from Cook Legacy](#)
- [Flexible Product Development](#)
- [Featured Product--Jacquelyn Coating](#)
- [Case Study--Marysville Upground Reservoir](#)
- [Cook Legacy at the Winter Games](#)

## Industries We Serve:

### Municipal Water:

[Tell us About Your Project](#)

### Power Generation:

[Tell us About Your Project](#)

### Liquid Natural Gas:

[Tell us About Your Project](#)

### Industrial Water

[Tell us About Your Project](#)

## Other Information

[Cook Legacy Project Questionnaire](#)

## Featured In This Issue:

### Flexible Product Development

We take inventing seriously at Cook Legacy, so we're often looking for interesting methods, techniques, and approaches to improve our invent practice. Several years ago we found a helpful technique in an article about Verizon Chief Information Officer Shaygan Kheradpir (titled "SI Manhattan" and featured on CIO.com in April 2005). We'll summarize the concept and then talk about how this applies to water.

#### The Concept: Finding the "Big Idea"

Traditional invention approaches work kind of like this (we're over-generalizing, but follow us here):

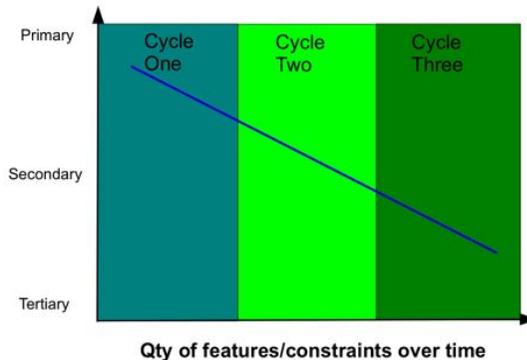
1. You look for a long time at the gizmo you have.
2. You figure out features it doesn't have.
3. You give it those features.
4. You call it a "revolutionary breakthrough."

The problem with this approach is that it misses the "big idea." A big idea is nothing without sound execution, but the beginning of any first invention is "I have a better idea, let's try this."

Kheradpir wanted to make sure that he kept the big idea pipeline flowing, so he employed product development cycles, a technique used prior venture capital firms developing software. The process works like this:

1. Get the big stuff right in a cycle of a defined time — say 30 days. As Kheradpir puts it "Show me what this could look like, bring it in hobbling." Don't worry about a laundry list of features and specifications yet. Once you have the big idea:
2. Add another cycle (maybe another 30 days, though usually we go faster) to turn the prototype into a real thing. Do this by adding spec and constraints.
3. Repeat until the concept is ready for execution.

#### Importance of feature



#### The Part About Water: Green Power at the Winter Olympics

The main benefit of this approach is that it focuses on the "big idea." Once the destination is set, the inventor can course-correct to make sure details are right.

Recently, Cook Legacy worked on a Coanda screen for a run-of-river hydro project for Fitzimmons Creek, a glacial Creek running through V resort near Vancouver. The project was intended to use energy from Fitzimmons Creek to power the site of the sliding and downhill events at Winter Olympics.

The site presented some technical problems, including volatile creek flows, heavy debris, and a rapid timeline. To support development, Cook took the following approach:

1. Developed a design dashboard integrating extensive testing and research into a simple user interface. This would show designers the i changing variables had on screen design performance.
2. Created an initial cycle to “Get the big stuff right” by focusing only on three questions:
  - a. Does it work?
  - b. Does it fit?
  - c. Will it break?
3. Added constructability and installation constraints in a subsequent cycle.
4. Added final design, weldment, fastening, and anchorage details.

This approach cut down product development time, helped maximize the structural and operability performance of the system, and allowed i and fix problems at a prototype level.



Installation of the Fitzsimmons Coanda screens

The Fitzsimmons Creek Hydroelectric site provides one illustration of how Flexible Product Development can be used in our industry. As alv have a problem we can help with, [contact us](#) with your ideas.

Thank you,  
[Randy Surface](#), Communications Director

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### Featured Product: Jacquelyn Coating for antifouling applications

Cook Legacy’s proprietary biofouling-and-corrosion-resistant Jacquelyn coating is our featured product for February. Jacquelyn is an engine alloy similar to 90-10 CuNi with significant advantages over that material. Jacquelyn provides superior antifouling and environmental perfor stronger, lighter screens than 90-10 CuNi would allow.

Jacquelyn has been tested for environmental, antifouling, and anticorrosion performance in fresh, estuarine, and sea water.

Three specific areas where Jacquelyn has been used to solve biofouling problems:

1. Offshore intake systems are often susceptible to biofouling. The low intake velocity at the screens creates good habitat for barnacles, r other similar organisms. This can occlude the fine mesh slots and lead to loss of performance. Cook Legacy intake screens with Jacqu solve this problem.
2. Vertical traveling screens often have 304 SS or 316 SS screens with 3/8” mesh openings. These screens are not designed to deal with i species such as Zebra Mussels. Jacquelyn can be used as a retrofit to ensure performance on traveling screens.
3. Intake pipes are often susceptible to biofouling, and can serve as a breeding ground for the release of further biofouling organisms into water system. Sometimes the end of plant water system cannot be chemically treated because of environmental concerns. In these situ use of Jacquelyn at the end of pipe ensures no biofouling on this portion of the system.





At top, application of Jacquelyn coating. In the center, a row of screens coated with Jacquelyn. On the bottom, a coated four-element screen.

If your biofouling needs could be met by Jacquelyn Coating, please [contact Cook Legacy](#).

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### Case Study: Marysville Upground Reservoir

For this project in Marysville, Ohio, Cook Legacy developed an eight-screen manifold and AirBurst system. The system included head loss and water level monitoring, an eight-valve AirBurst, a guide rail system, and Jacquelyn antifouling protection.



Installed AirBurst System in Marysville, OH

If you would like more information on this project or Cook Legacy, please [contact Cook Legacy](#).

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### Cook Legacy at the Winter Games

Along with our design of several Coanda screens at the Whistler, British Columbia site, Cook Legacy is also dabbling in some winter sports connection with the Winter Olympics. Check out the [video](#)!

If you would like more information on this project or Cook Legacy, please call 614.524.4588 or email [randy.surface@waterscreen.com](mailto:randy.surface@waterscreen.com).