



Microgrid maintenance software

for emerging markets &
remote industrial sites

Piper Foster Wilder | Founder/CEO







Despite microgrids' widespread use & importance

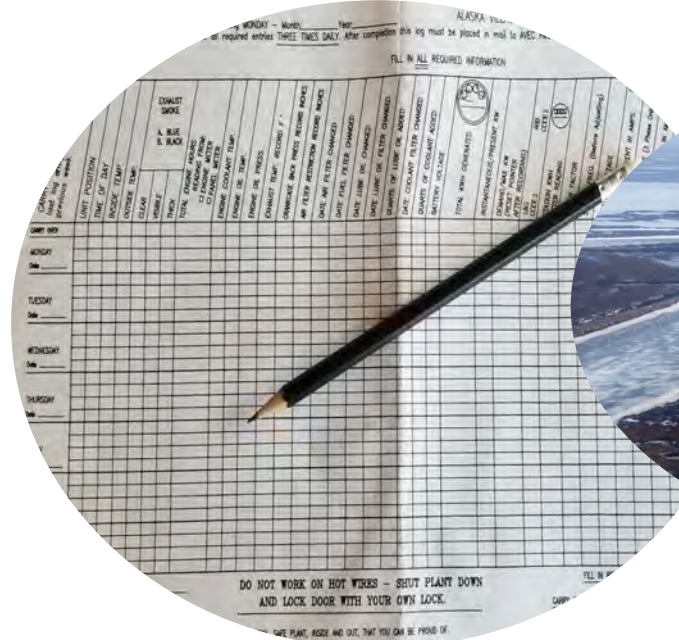
the maintenance is

expensive, failure-prone, & archaic



Why microgrid maintenance is failure-prone

Antiquated Management Tools



Pencil, paper and fax

Remote Locations



Expensive logistics

Operator Experience Level



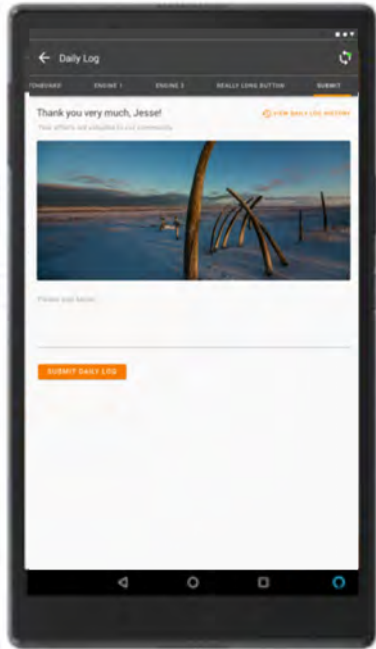
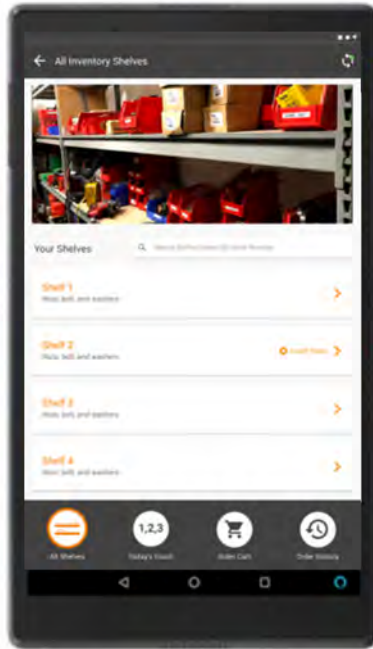
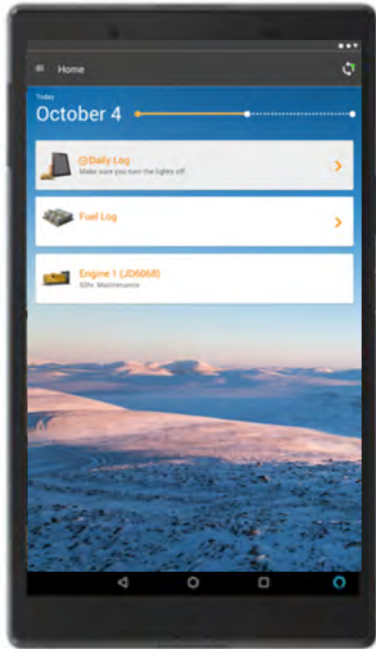
Unsupported, unsupervised

Minimum cost/ failure incident: \$300,000

**Globally: \$8.3B in shortened
asset life**

because *replace* is method of *repair*

Our solution: maintenance software for technology's next billion users



Operator App

Administrator Dashboard



Human Centered Design



MEANINGFUL

The story of ideas that fly



BERNADETTE JIWA

"The most important book for your boss to read this year."

SETH GODIN

"Products that give us more than we knew we wanted."

"Innovation is a byproduct of empathy."

"Design creates value by building emotional capital"

✓ Continuous learning

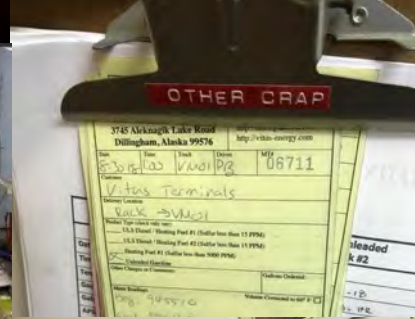
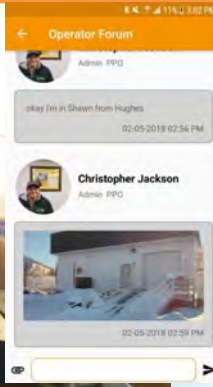
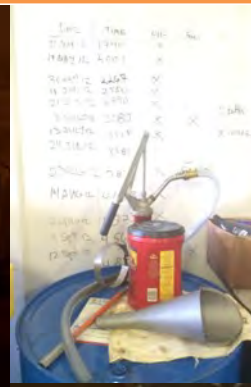
43 people in 4 geographies for a total of 64 hours in February

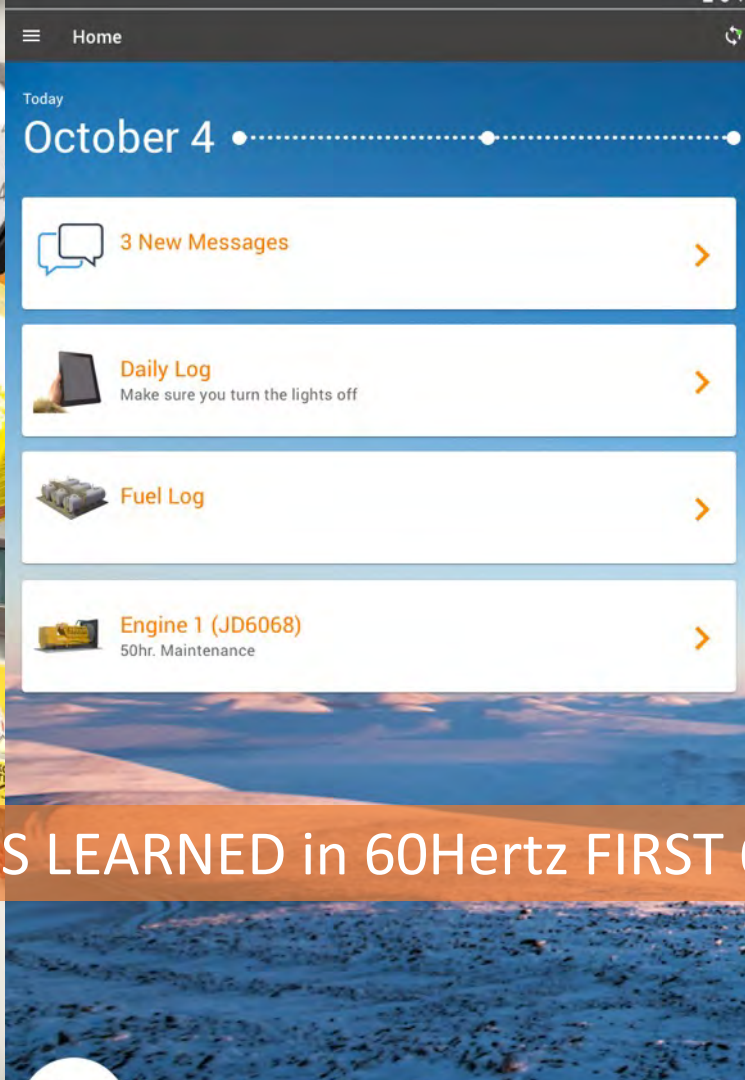
✓ What are the Jobs to Be Done?

This framework identifies inputs not outputs

✓ Iteration!

Prepare to get it right on the 10th time.
Shorten the feedback loop.
Prototype





LESSONS LEARNED in 60Hertz FIRST 600 DAYS

A middle-aged man with grey hair is wearing large, black and red headphones. He is looking directly at the camera with a neutral expression. He is wearing a grey zip-up sweater over a blue shirt. The background is a control room or technical facility with various panels, buttons, and lights. A prominent panel behind him has several indicator lights, including a green one that is lit. The overall lighting is somewhat dim, with some highlights from the equipment.

The human maintainer of assets is indispensable

Essau Moore, Quinhagak Alaska



Embrace training & retraining

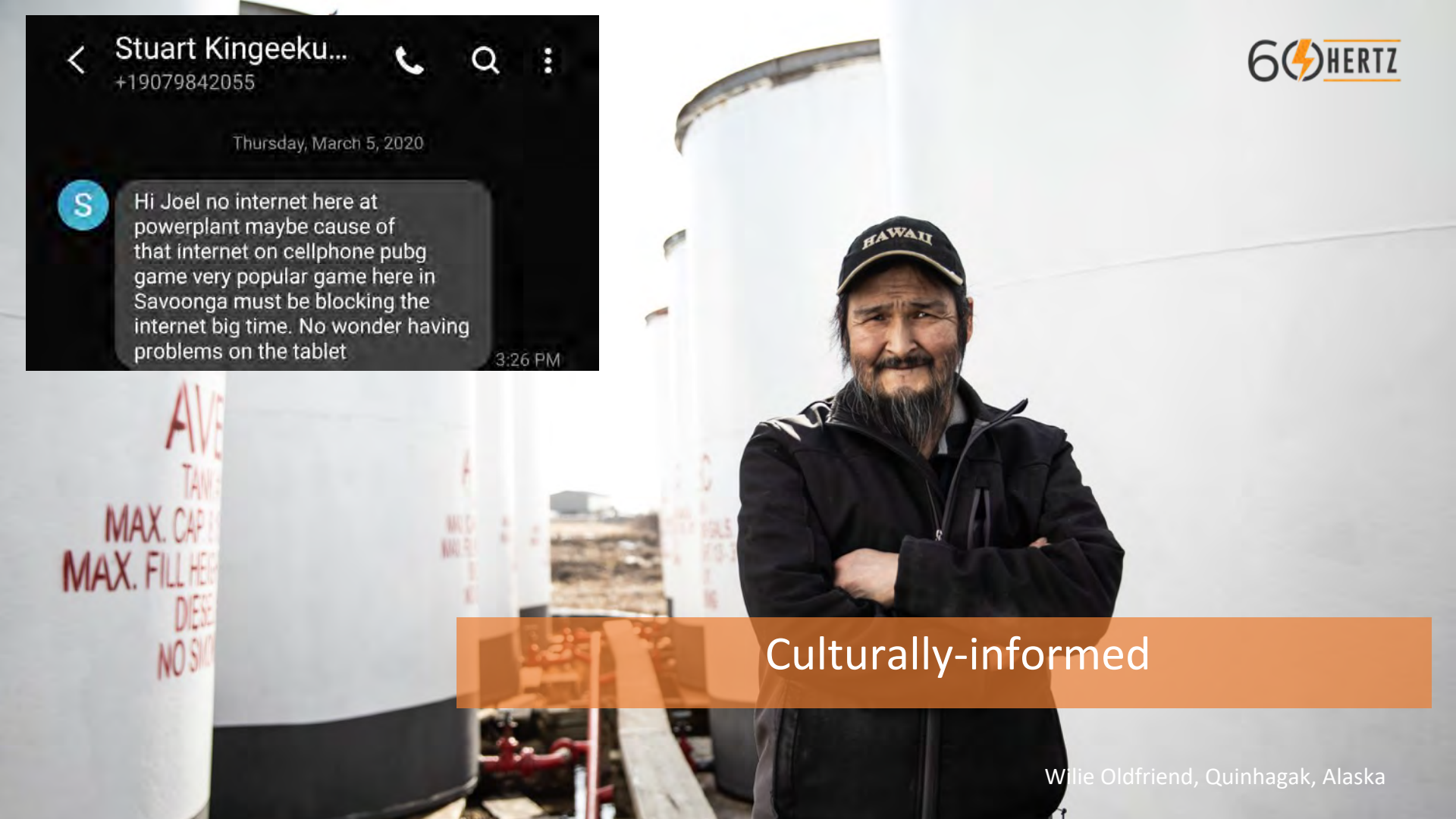
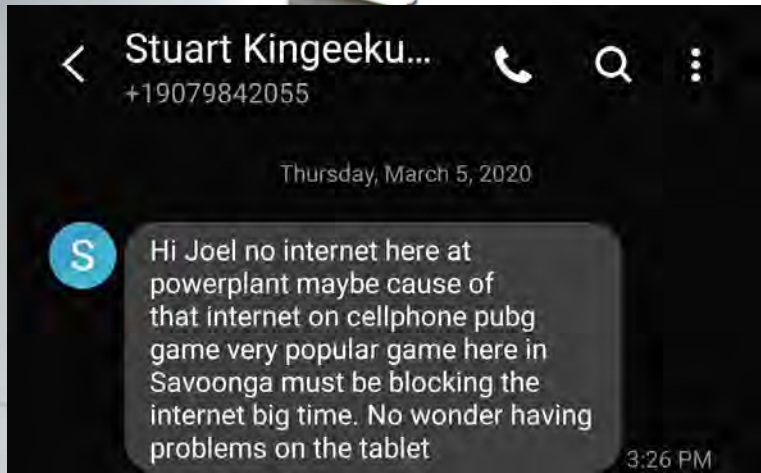
A photograph of two men in work attire. The man in the foreground is wearing a black jacket and a tan cap, looking down at a tablet with an orange case. The man in the background is wearing a tan jacket and a tan cap, also looking at a tablet with an orange case. The background is slightly blurred, suggesting an indoor work environment.

Willingness to try technology

Frank Brown Jr &
Walter Joseph; Eek, Alaska



Necessity of connection



Culturally-informed

Recognition yields job-ownership
& performance



#1 New York Times bestselling author
of *The Road to Character*

DAVID
BROOKS

THE
SECOND
MOUNTAIN

The Quest for a Moral Life

“Work is the way we make ourselves useful to our fellows. ‘There may be no better way to love your neighbor,’ Tim Keller put it, ‘whether you are writing parking tickets or software or books, than to simply do your work. But only skillful, competent work will do.’”

“People who have achieved mastery no longer just see the individual chess pieces; they see the whole. They perceive the field of forces that are actually driving the match. Musicians talk about seeing the entire architecture of a piece of music, not just the notes.”



Point Hope, Alaska



Let's remember
the people who
are the heartbeat
of any microgrid!



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