

Integrating In-House Software Engineers Into Your Organization's Culture

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About the speakers

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2w · Edited



Amazon did not kill the retail industry. They did it to themselves with bad customer service.

Netflix did not kill Blockbuster. They did it to themselves with ridiculous late fees.

Uber did not kill the taxi business. They did it to themselves with limited the number of taxis and fare control.

Apple did not kill the music industry. They did it to themselves by forcing people to buy full-length albums.

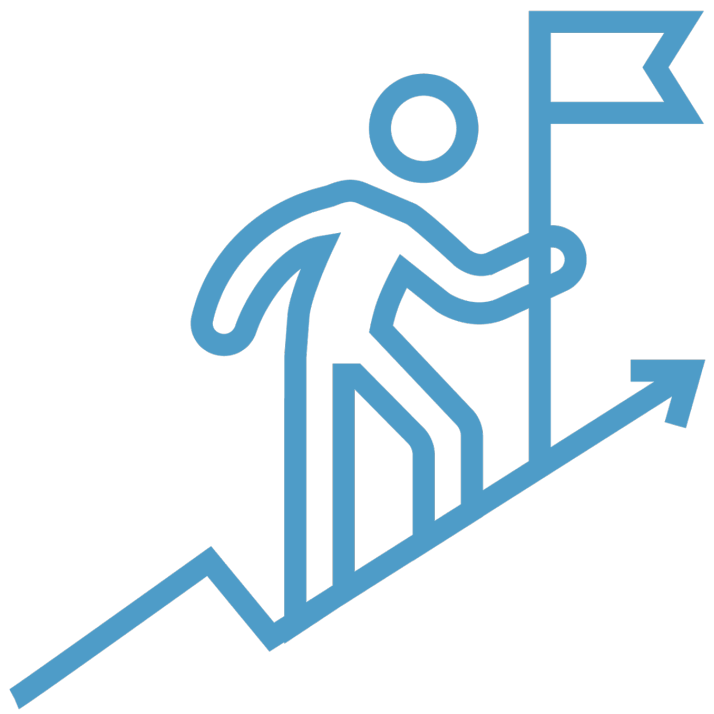
Airbnb did not kill the hotel industry. They did it to themselves with limited availability and pricing options.

Technology by itself is not the real disruptor.

Being non-customer centric is the biggest threat to any business.

Alberto Brea

Learning Objectives



Discover the challenges that business leaders will confront to remain competitive



Learn how to create a strategy for how to remain relevant in the rapidly changing AEC industry



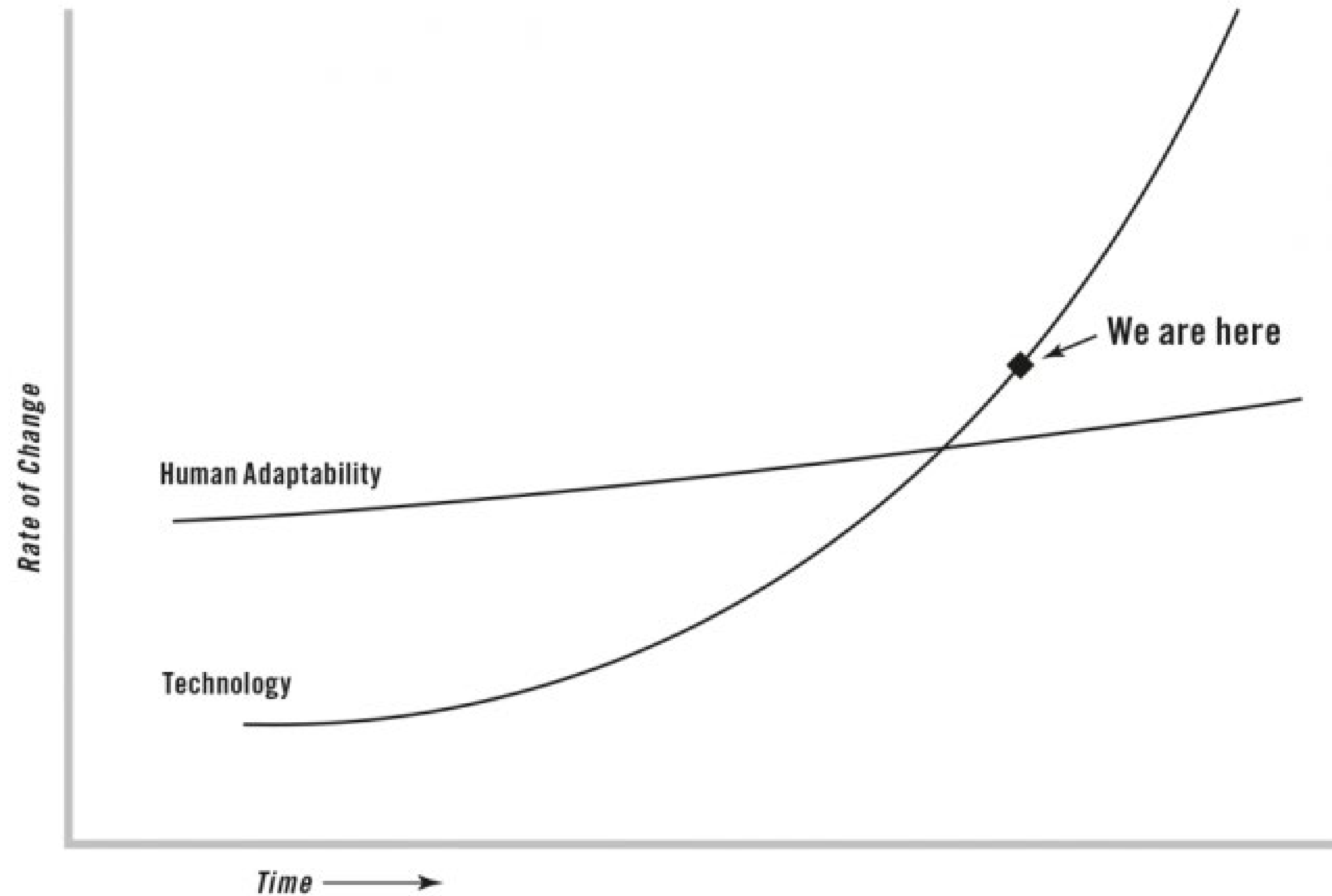
Learn how to build an innovative culture where team members are generating ideas that lead to action



Learn how to use in-house software engineers to utilize Revit as a platform for doing more, better, with less

The Age of Acceleration

Moore's Law



The age of accelerations graph: technological innovation has surpassed human adaptability

Embrace the challenges to evolve forward!

- Get comfortable being uncomfortable
 - act like a start up
- Be willing to spend money on your people and technology
- Develop a bench of future leaders to leverage and scale
- Focus on delivering more value to your true customer

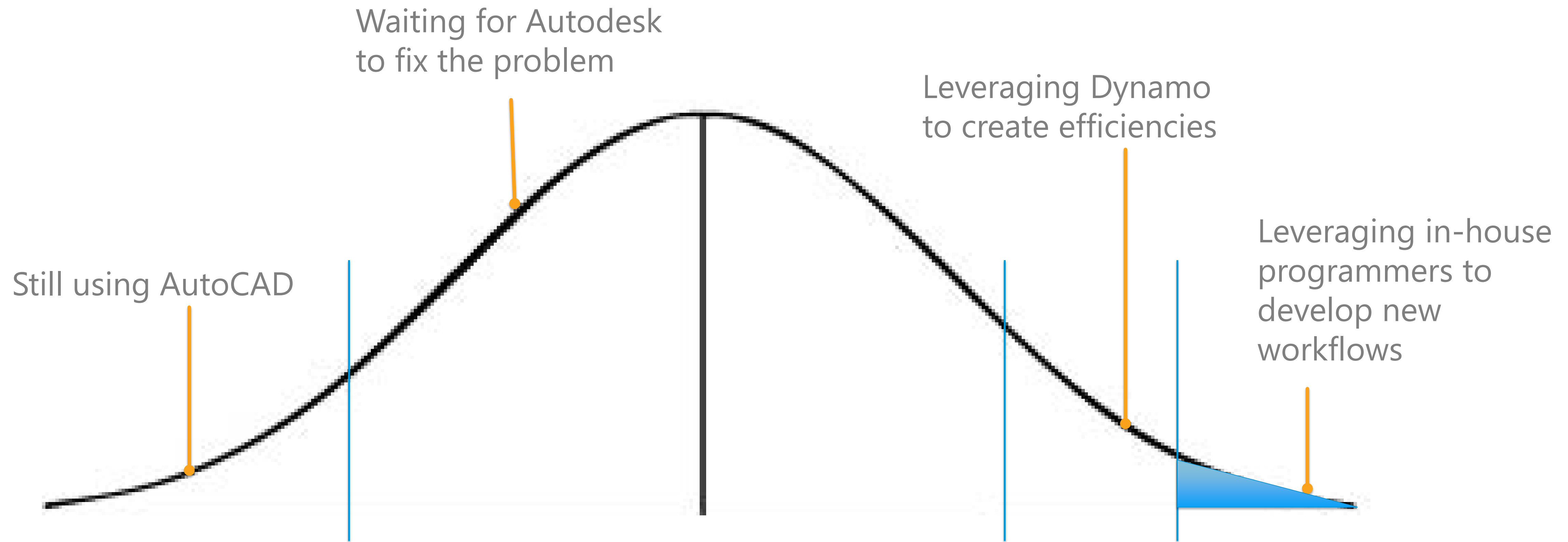




The million-dollar question. . .

Will a construction company become technology savvy before a technology company become construction savvy?

Create a strategy for how to remain relevant in the AEC industry

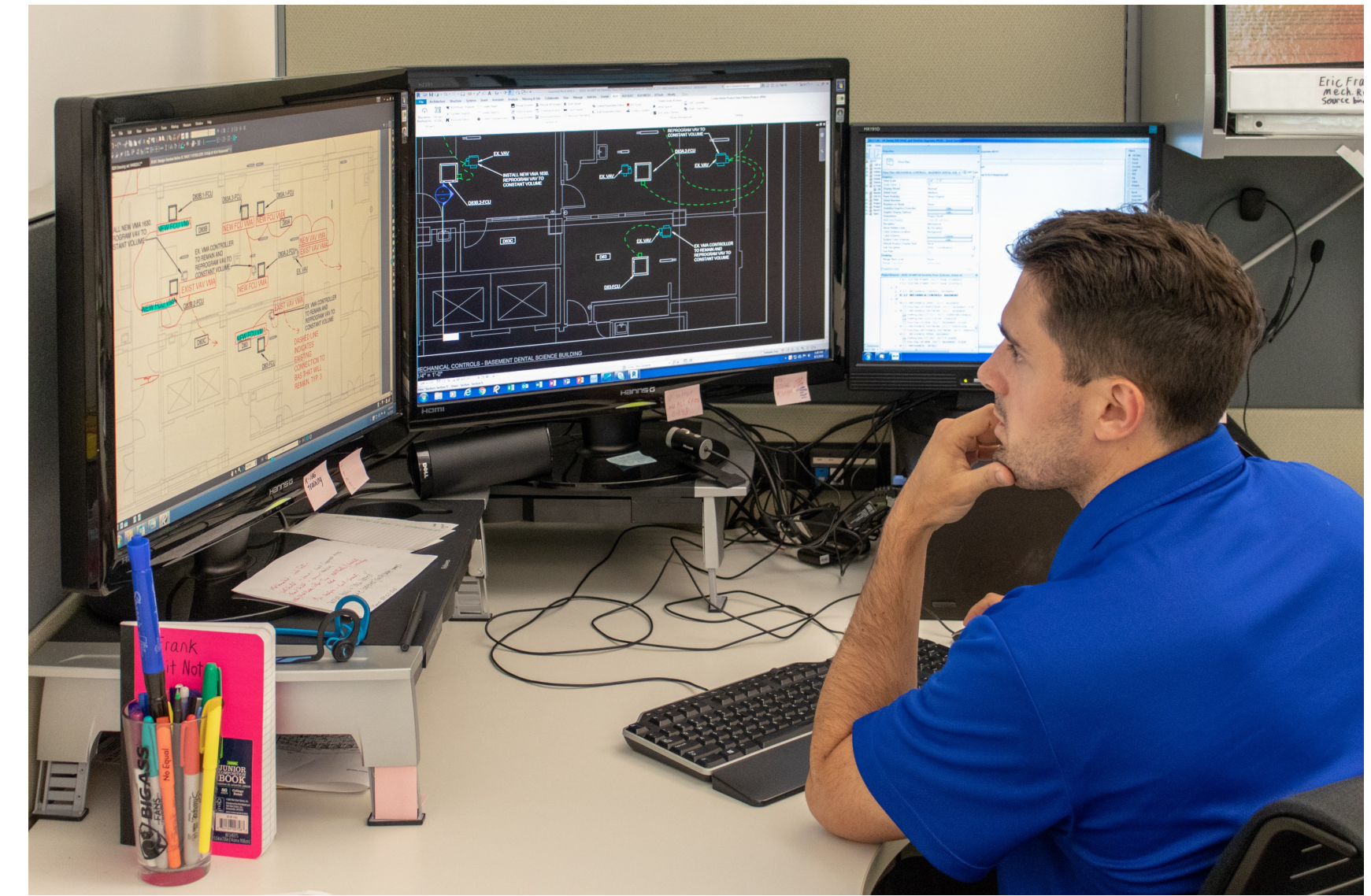
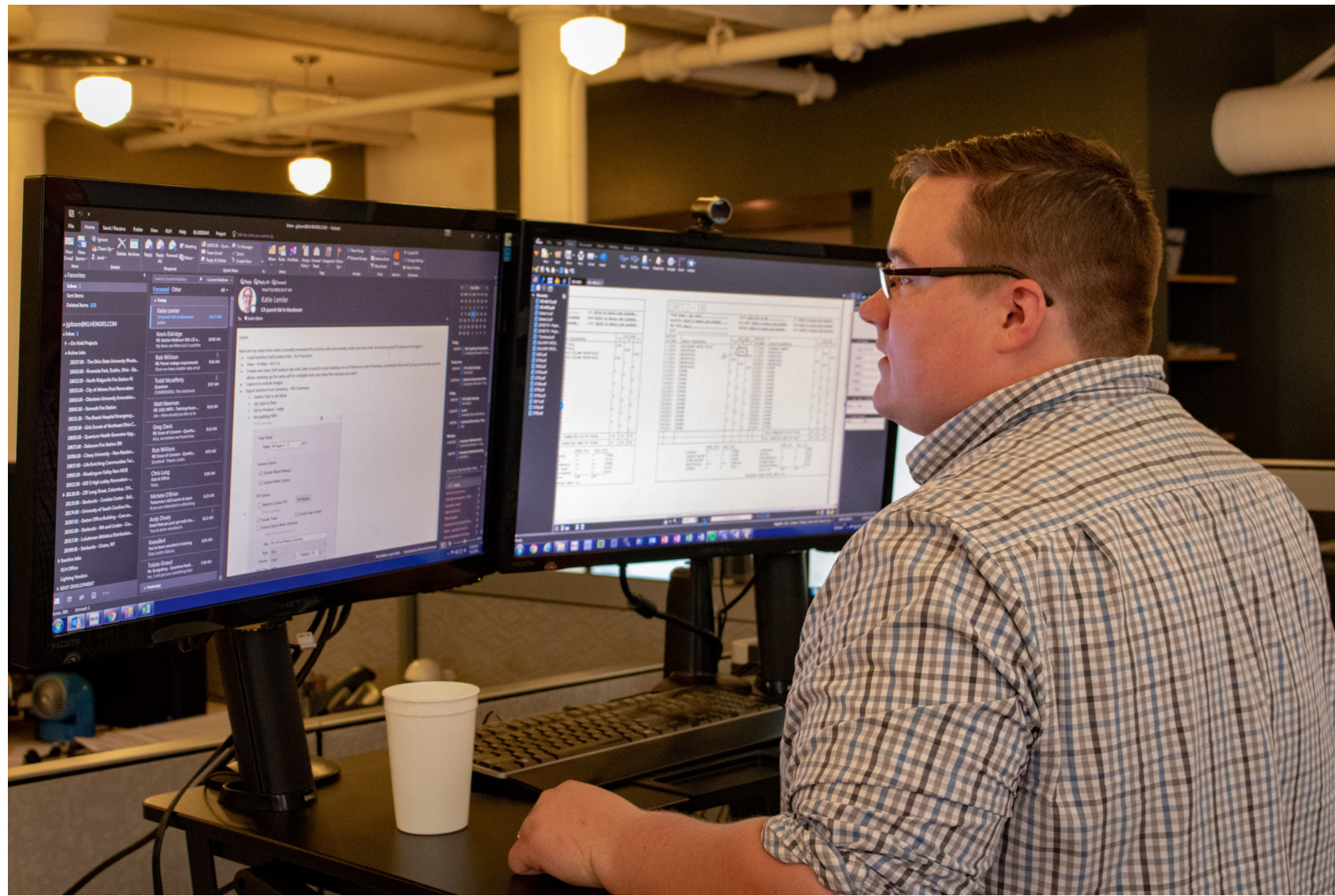


The Bell Curve- A Disruption of the Industry



Make a vision tangible

- Translate into initiatives that can be easily communicated, understood and measured
- Provide the tools on how to execute the strategy itself



Empowering in-house talent

Clear communication of vision and strategy

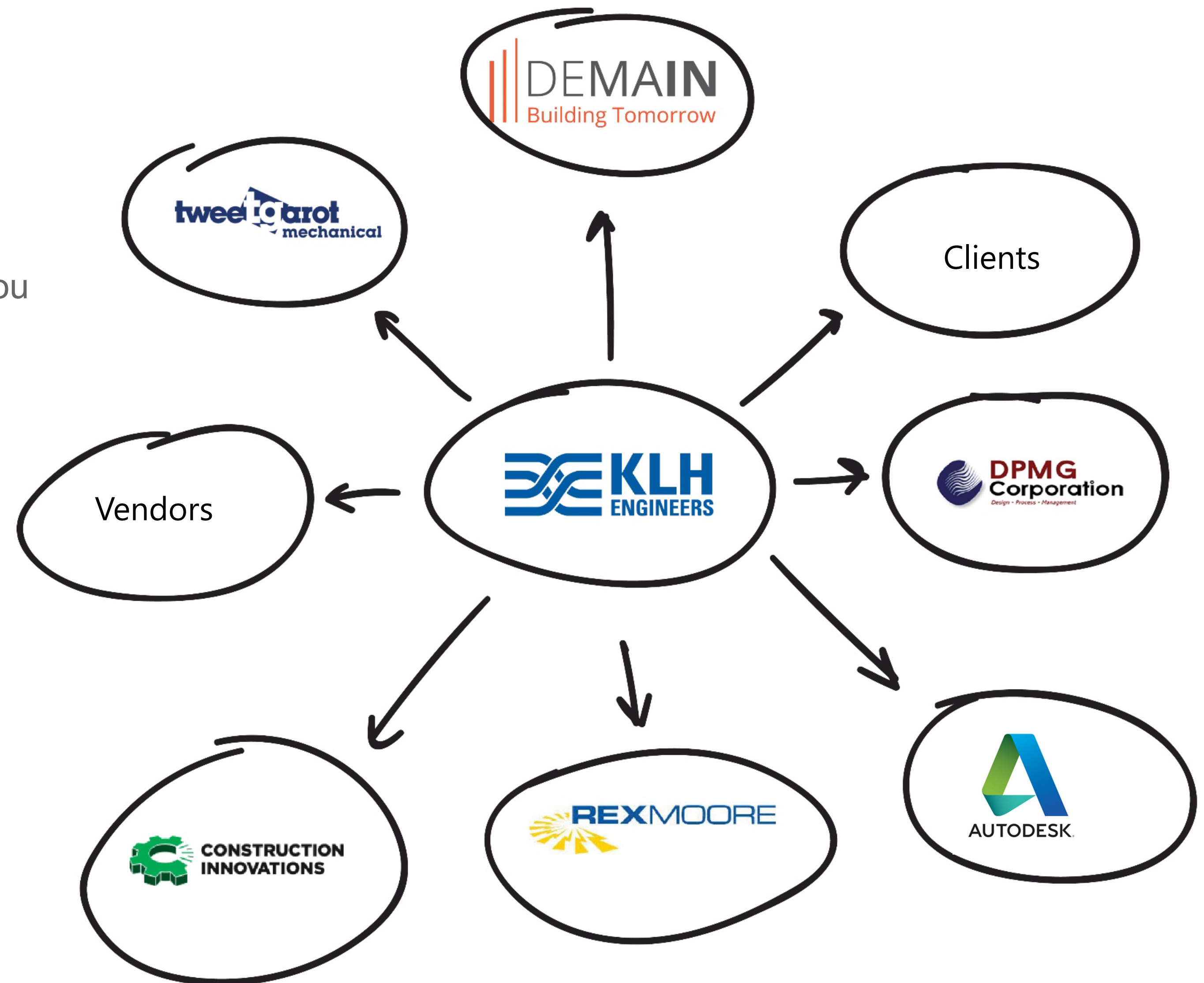
- Sets chain of events
- Some may leave, that's ok
- Powerful tools for those engaged

Empowered employees will lead

- Understand the strengths of the individuals on your team
- Empower them to leverage those strengths and get out of the way
- Doer-programmer can lead to more

Like-Minded Partners & External Collaboration

- Not one company operates in a vacuum
- External relationships need to mature and align with you
- Ceiling is lowered without external engagement



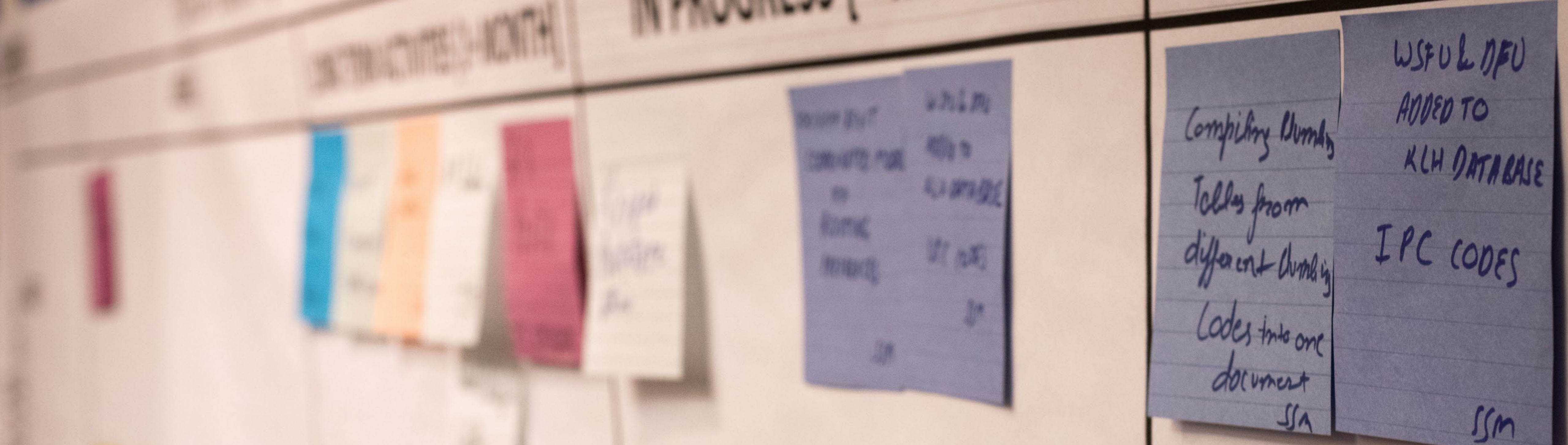
“Culture eats strategy
for lunch”

Peter Drucker

Build an Innovative Culture

- It's not easy!
- Leaders must be introspective
 - How will you behave differently?
 - How will you drive change?
 - It's all about your energy
- It must be top-down (at first)
- Communicate often
 - Be clear on “what” and “why”
- Encourage, empower, support and get out of the way
- So....how do you get off the ground?





The Kanban

HELPS ORGANIZATIONS:

- Visualize their work
- Maximize efficiency
- Be agile

LEADERS SHOULD:

- Establish Huddle rhythm
- Appoint team members
- Create task-oriented “tickets”
- Focus on MVPs

BEHAVIORS THAT FORM:

- Develops iterative mindset
- Foundation to cultural change
- Accountability
- Progress = Momentum

AN OUTCOME TO EXPECT:

- Tickets require programming
- Programmers in high demand
- Look within – doer/programmer
- Beware of unanticipated consequences

Leader as a Preacher

GOALS

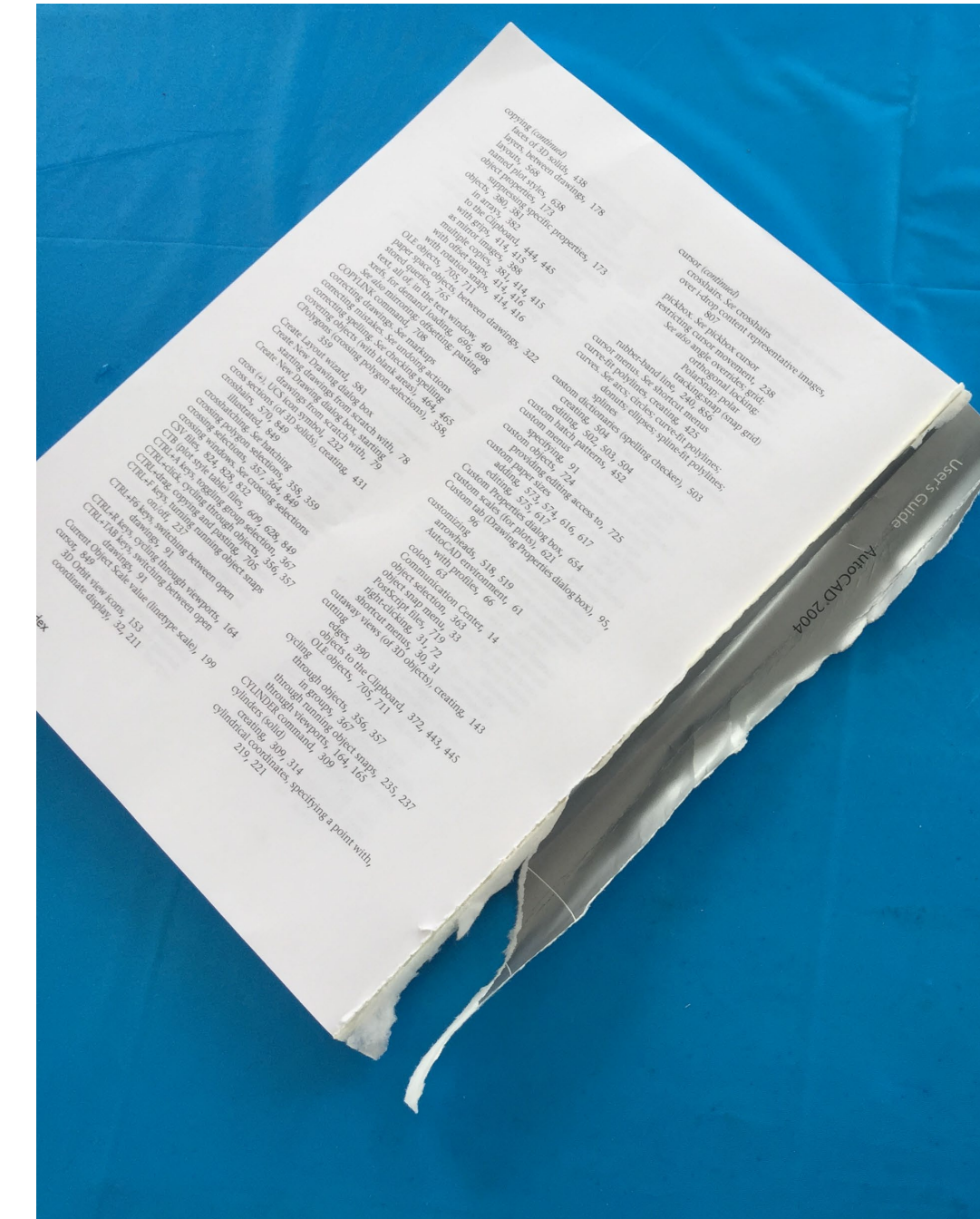
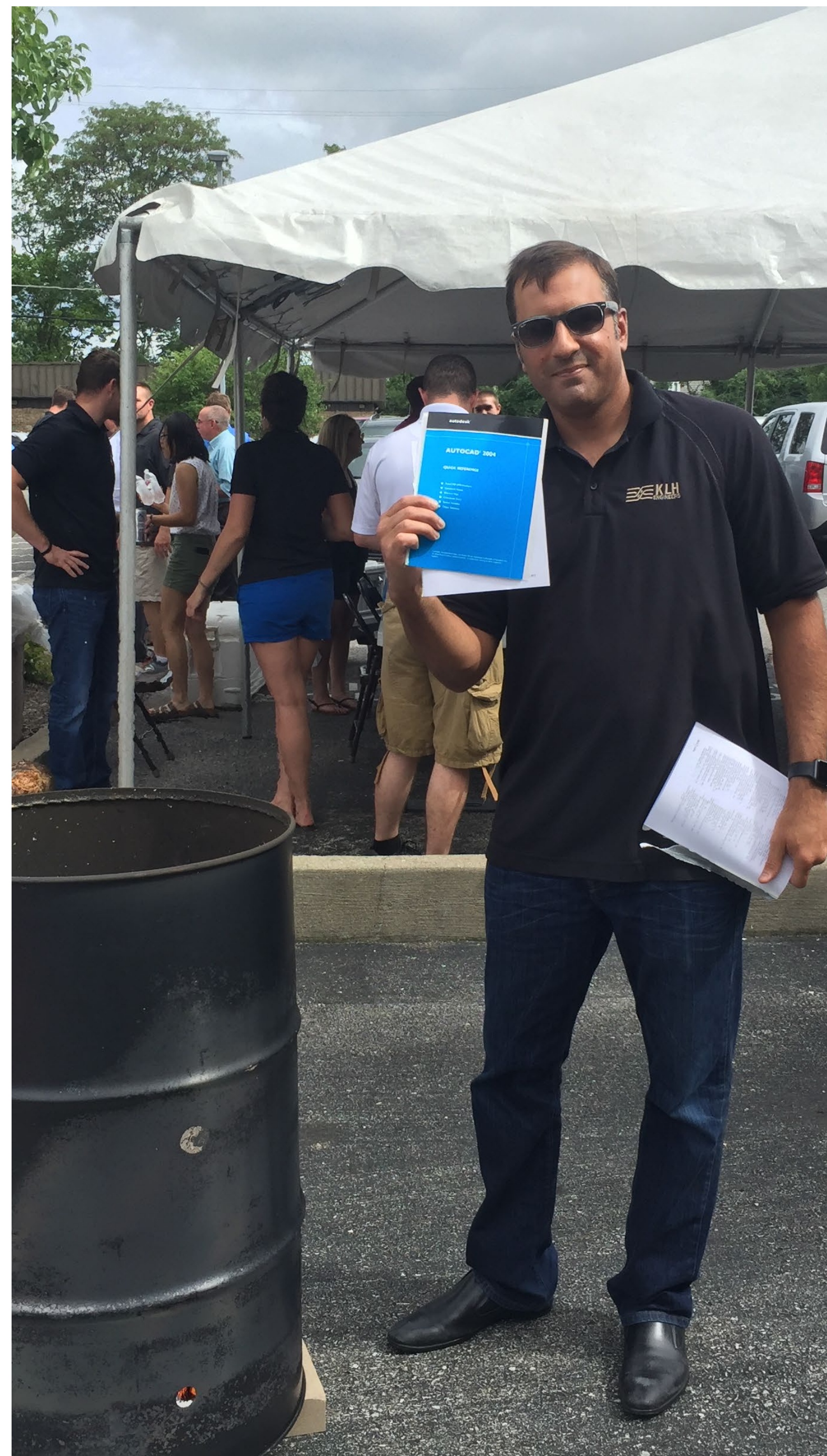
- Constantly speak to company's goals with passion and conviction
- Reinforce the narrative
- Promote unity
- Inspire timid or skeptical employees

PROACTIVE MESSAGE

- Automation: An opportunity not a threat
- Technology company, not a software company
- Involvement is key, not always programming
- Explain the investment to employees

DRIVE THE CHANGE

- Be the biggest cheerleader
- **Celebrate often**

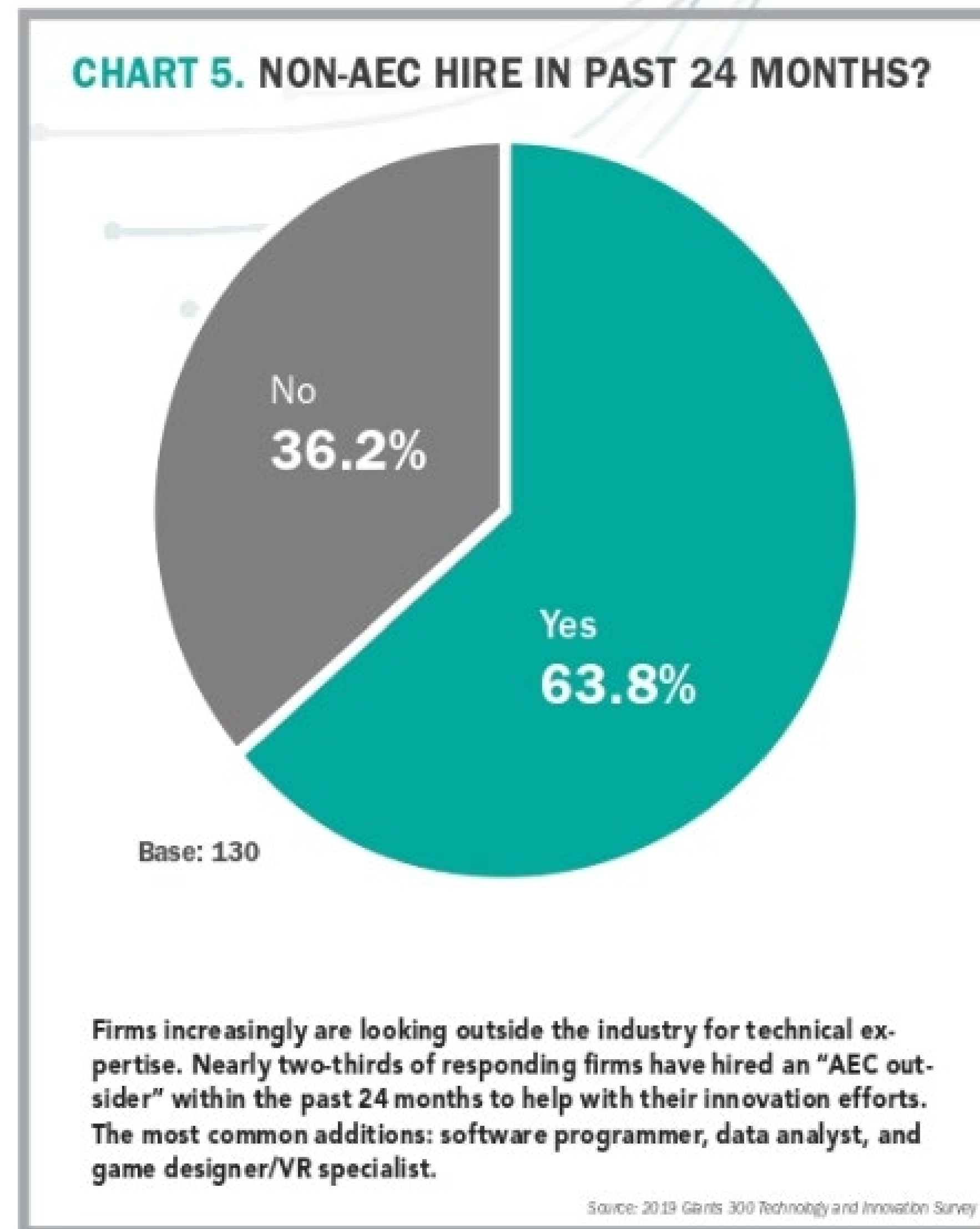


Finding your groove



"It was accidentally reversed one day and
our profits immediately skyrocketed"

The opportunity to double-down



The State of Tech Innovations at the AEC Giants
Building Design + Construction
October 2019



Doer
Programmer



Software
Engineering
Co-ops



Hire Co-op
Full Time

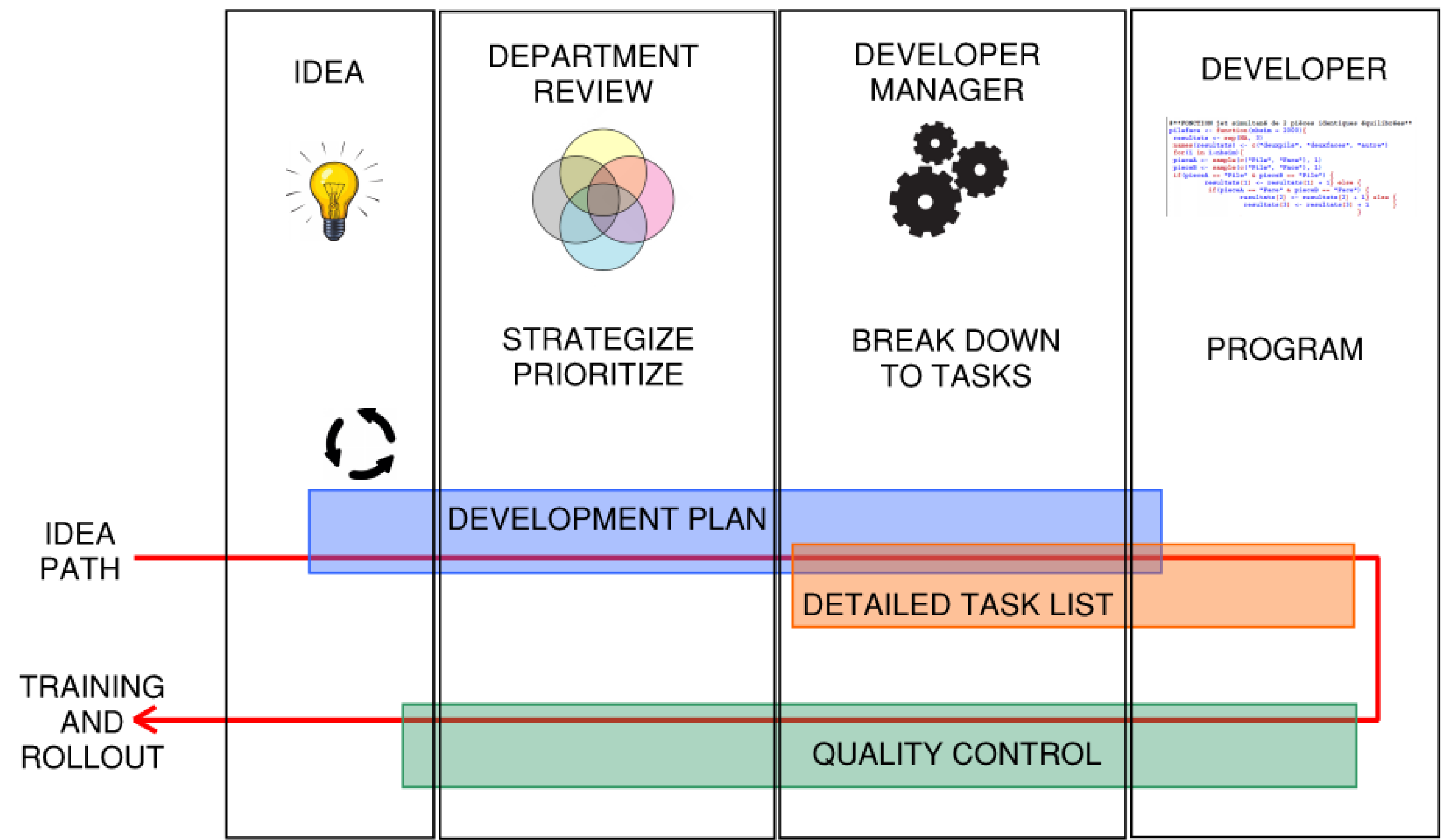


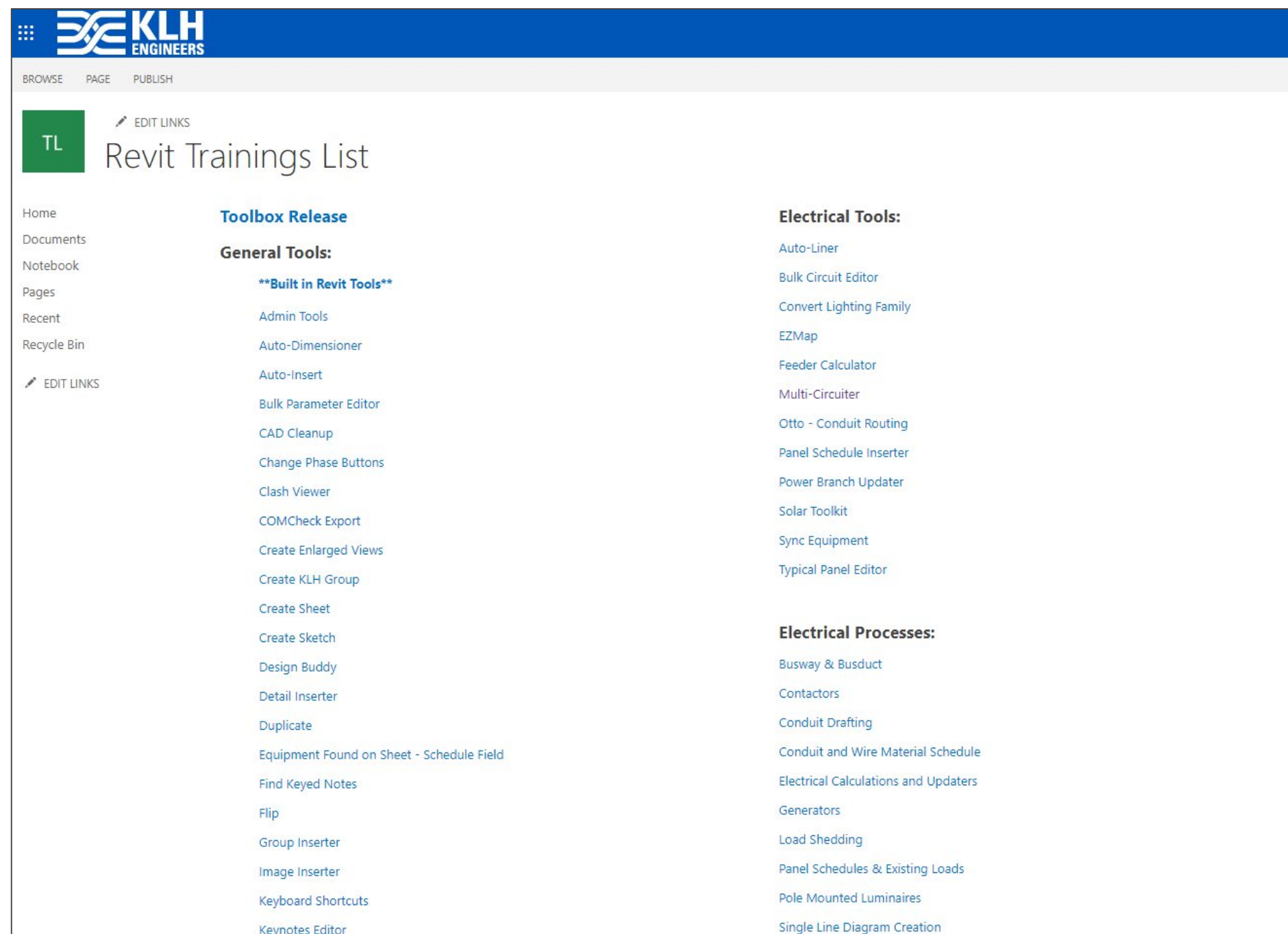
Hire Full Time
Programmers

Leveraging in-house software engineers

The PEOPLE

The Process – Standardize Development





The Process

Training

- Lunch & Learns
- Revit agents
- Micro labs
- On boarding
- Department meetings
- Essential trainings



The Process

Feedback loop



KLH Training [Follow](#) – October 1 at 2:14 PM from Microsoft PowerApps and Flow

Feedback Form: Software Feedback Revit Electrical Tools J-R

Tool: Multi-Circuiter

Feedback Type: Bug

From: lheil@KLHENGRS.COM

Comments: Conn's 21570 - After placing all the electrical devices using the group inserter, I ran multi-circuiter using the connection parameter. There are groups that should have been circuited together, however they were all circuited as one circuit per connection.

[LIKE](#) [REPLY](#) [SHARE](#) ...

Seen by 52

[#Bug](#) [#Multi Circuiter](#) [#Tools](#) [#Electrical](#) [#Revit](#)



Patrick Fernbach – October 1 at 4:44 PM

[Luke Heil](#), this is logged 5587. Thanks for the feedback.

cc: Luke Heil

[LIKE](#) [REPLY](#) [SHARE](#) ...



Jeff Mills – November 4 at 12:51 PM

This is fixed

[LIKE](#) [REPLY](#) [SHARE](#) ...

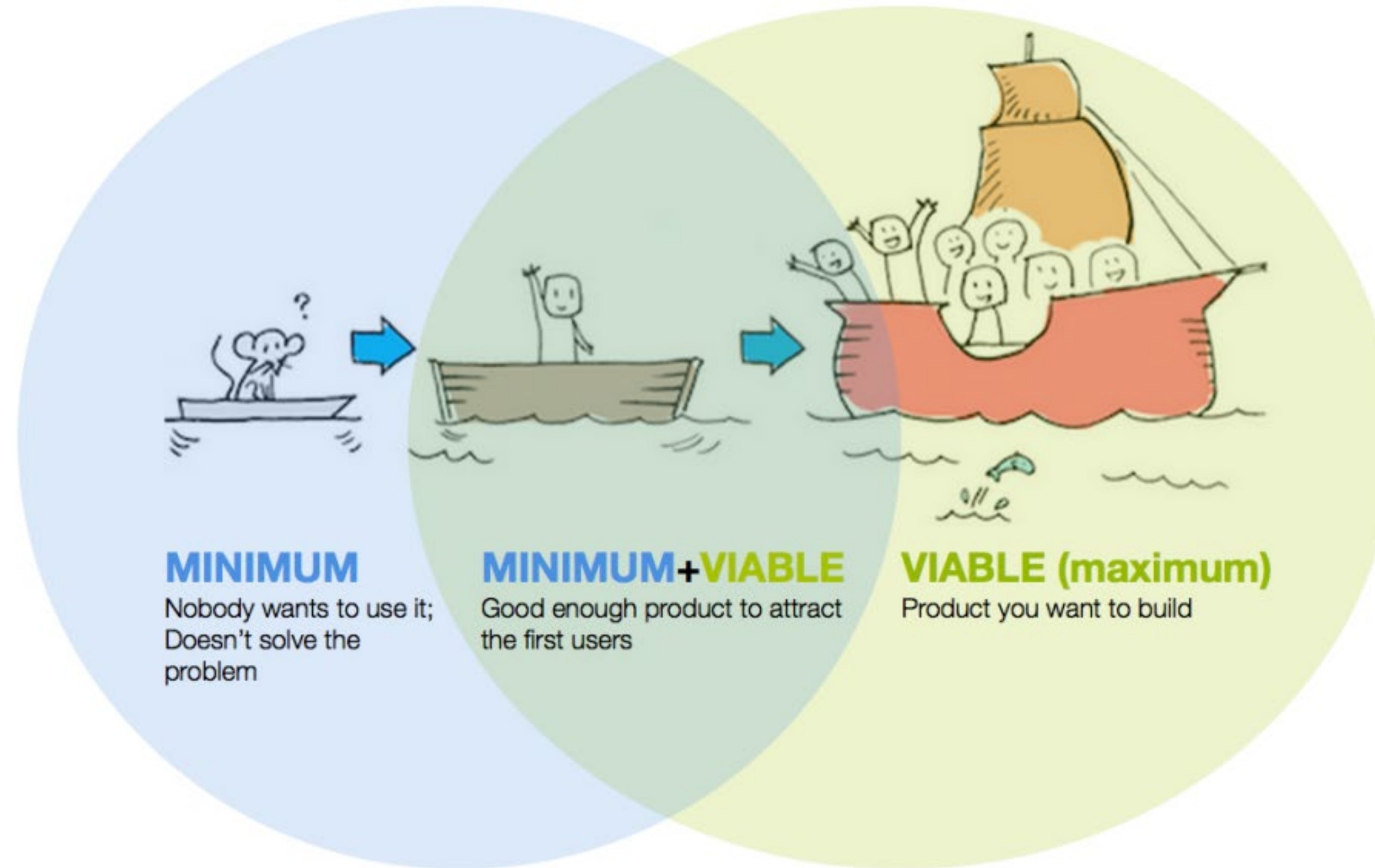
[Luke Heil](#) likes this



Write a reply



Minimum Viable Product



Minimum Viable Product

HOW **NOT TO BUILD** A MINIMUM VIABLE PRODUCT



1



2



3



4

ALSO HOW **NOT TO BUILD** A MINIMUM VIABLE PRODUCT



1



2



3



4

HOW **TO BUILD** A MINIMUM VIABLE PRODUCT



1



2



3



4

It starts with you. . .

Set a
vision

Develop
a
strategy

Empower
others

Take stock
of your
current
team

Acknowledge
your
responsibility in
crafting a
collaborative
company

Bring the
energy, share
encouragement,
and keep
pushing

Understand
without the right
context,
programming
could result in
minimal returns

Be ready, the
addition of
software
programmers
could be
transformational

Your action items:

Find your
doer/programmers

100%
Revit

Create the
Single Source
of Truth

Which blank space would you want to be in?

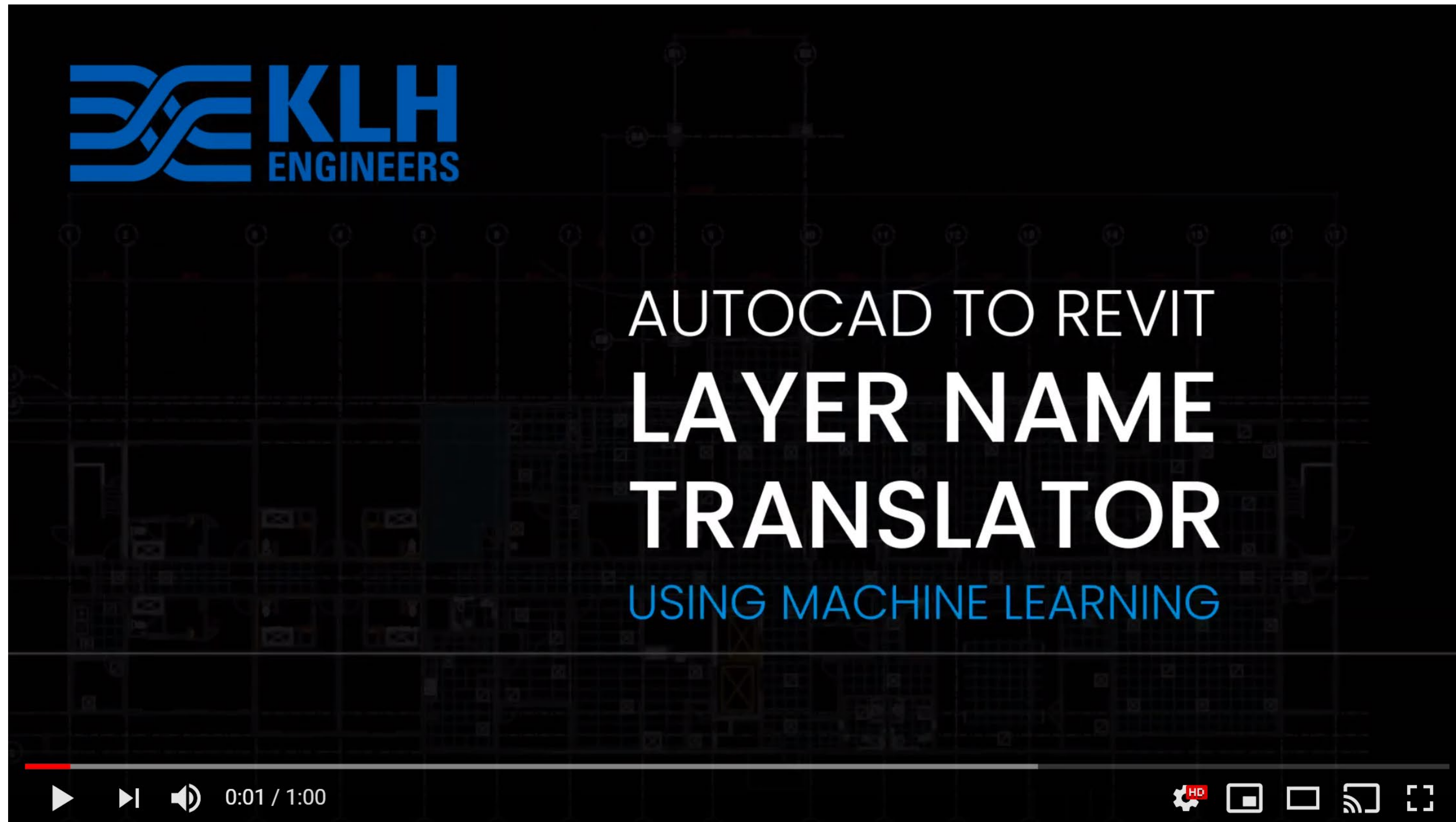


KLH Engineers@KLH_Engineers

Now

_____ did not kill _____. They did it to themselves with preventable change orders and sliding schedules.

IN-HOUSE SOFTWARE ENGINEERS CAN HELP YOUR ORGANIZATION DEVELOP
TECHNOLOGIES TO SOLVE OLD PROBLEMS AND AWAKEN NEW POSSIBILITIES



<https://youtu.be/LCrKfMbevOY>



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