

# Charter Communications

**Scaling an Engineer-to-Order Construction Process to  
Make-to-Stock Volumes**

**October 16, 2024**

**Charter**  
COMMUNICATIONS

# About Charter Communications...

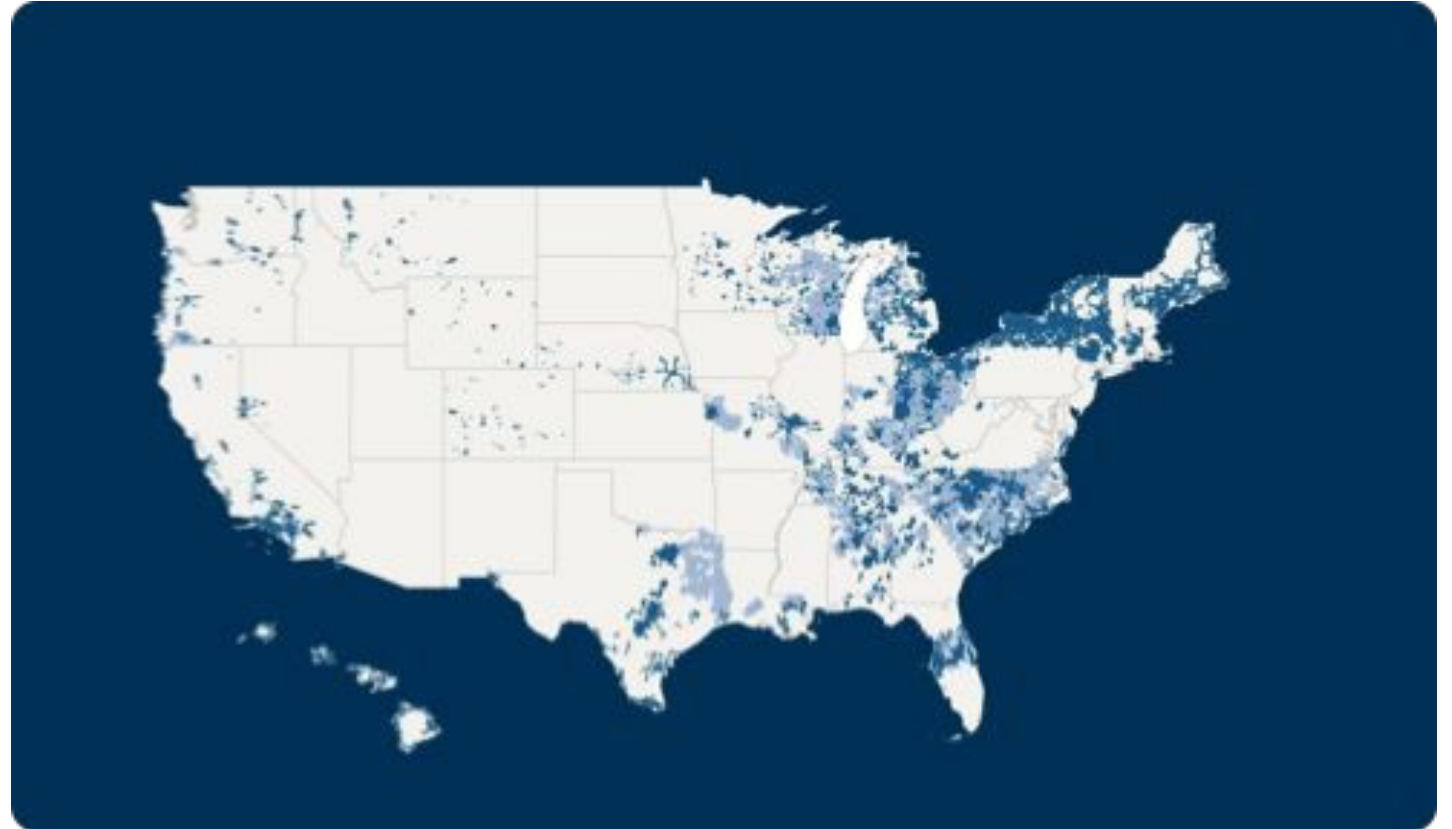
**FORTUNE 100** Company

**\$54.6B** Revenue in 2023

**57.8M** Passings in 41 states

**31.8M** Customers

**900K** Network Miles



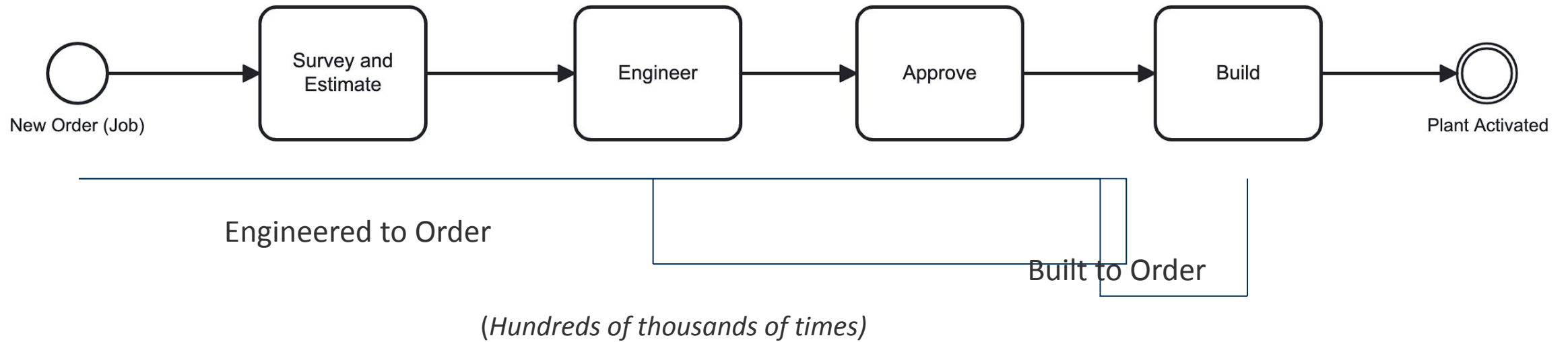
# About Charter Construction...

**\$4B+** Capital invested in line extensions in 2023

**50K+** Miles of new plant

**1M+** New passings

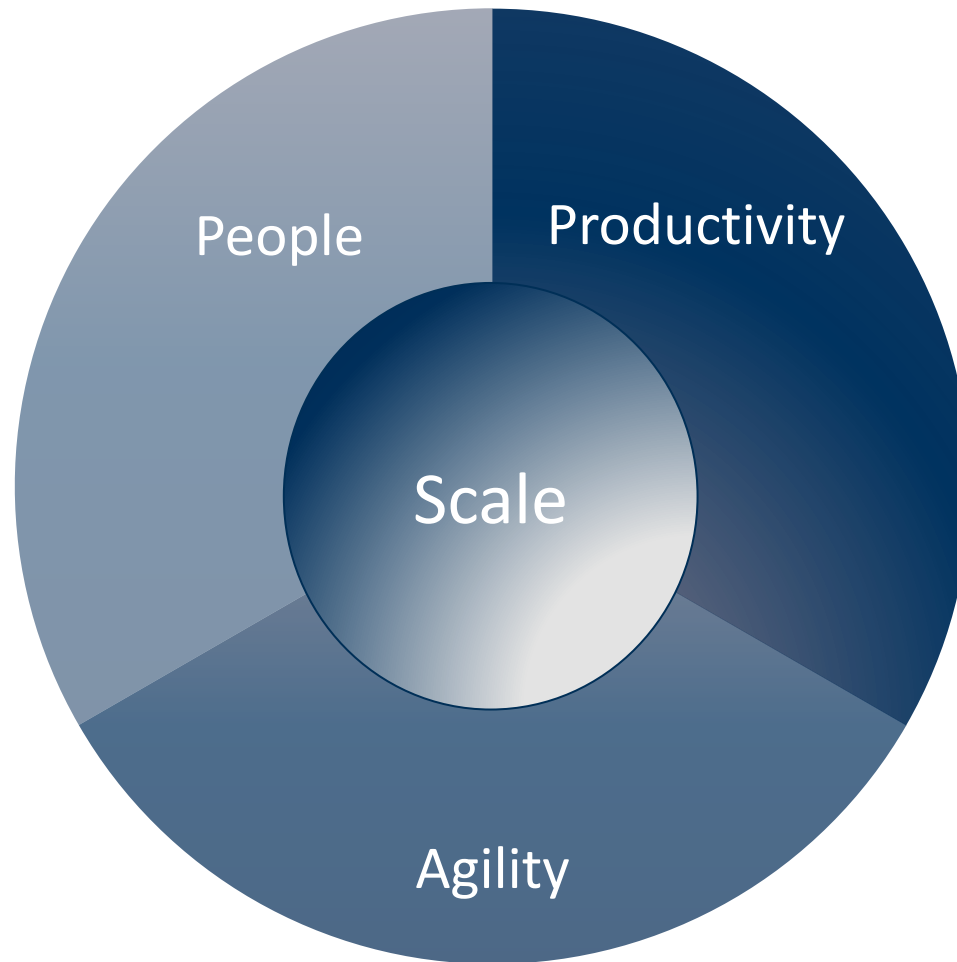
# About Cable Construction...



# THE PROBLEM:

How do we scale an **engineer-to-order** process to operate at **make-to-stock volumes**?

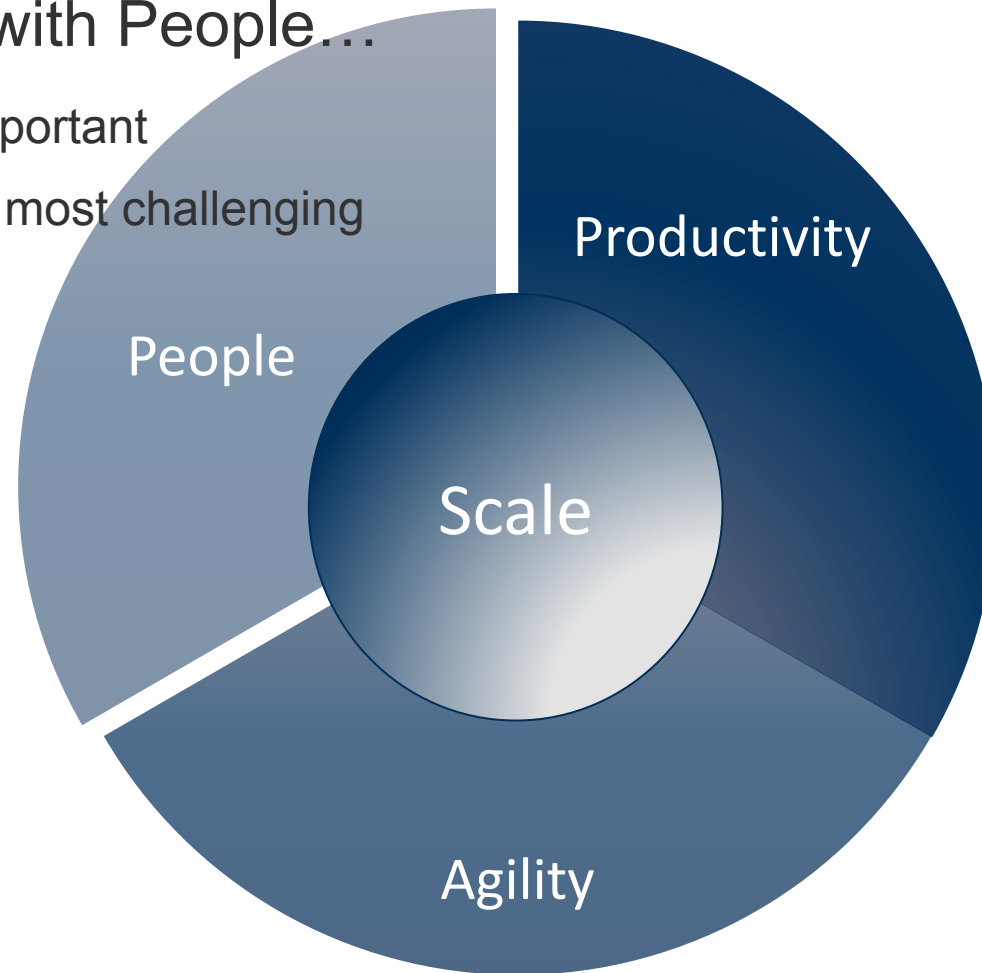
We focus on three dimensions to achieve scale...



# It all starts with People...

The most important

But also the most challenging



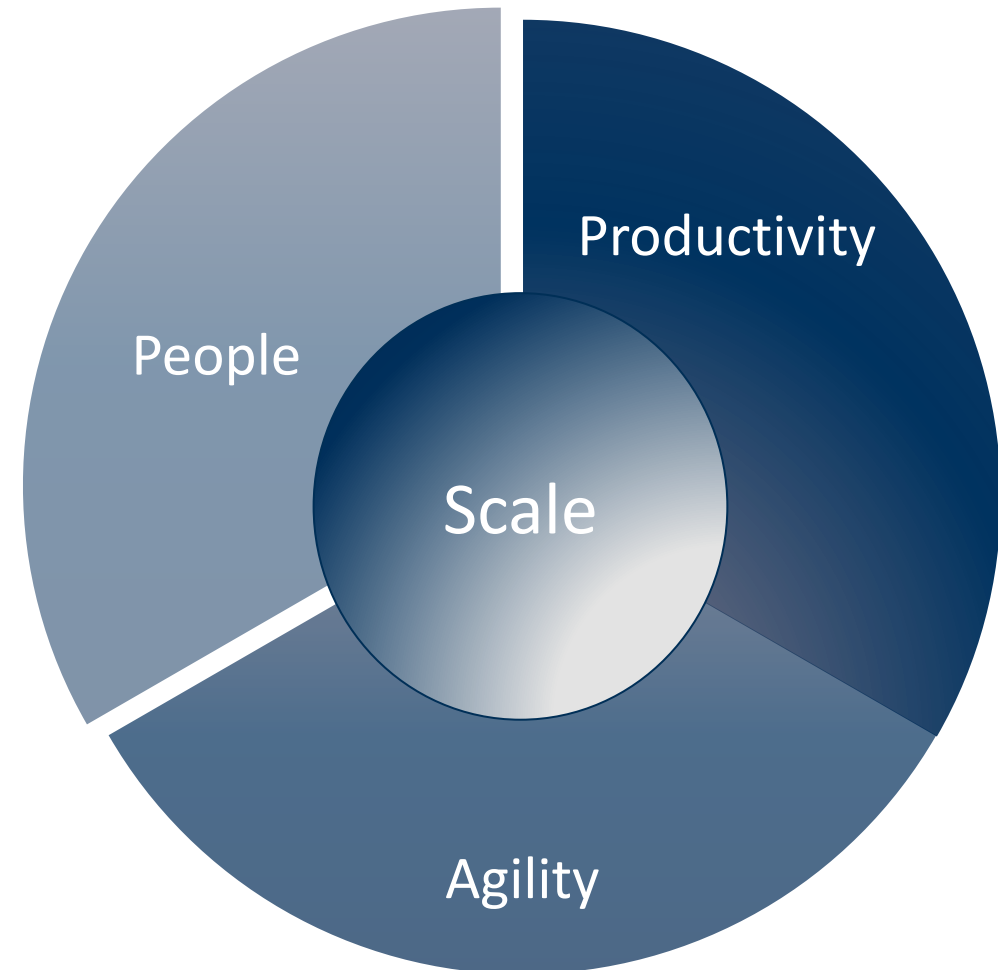
...because the change we are introducing is *profound*

Introducing digital tools into a field which historically had none or nearly none

A large community with big disparities in technology acceptance and skill levels

An entirely new way of organizing and managing work

Nothing short of a “Digital Transformation”





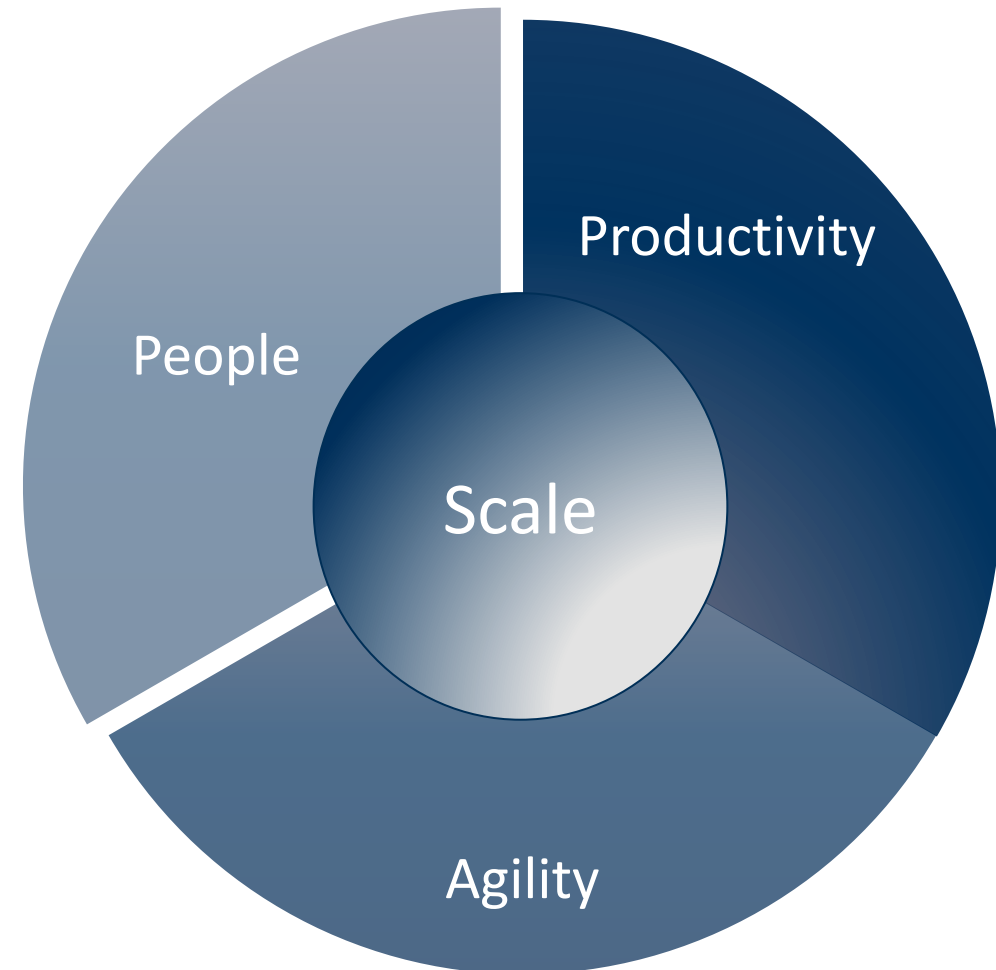
## **Make the system work for Construction, rather than making Construction work for the system**

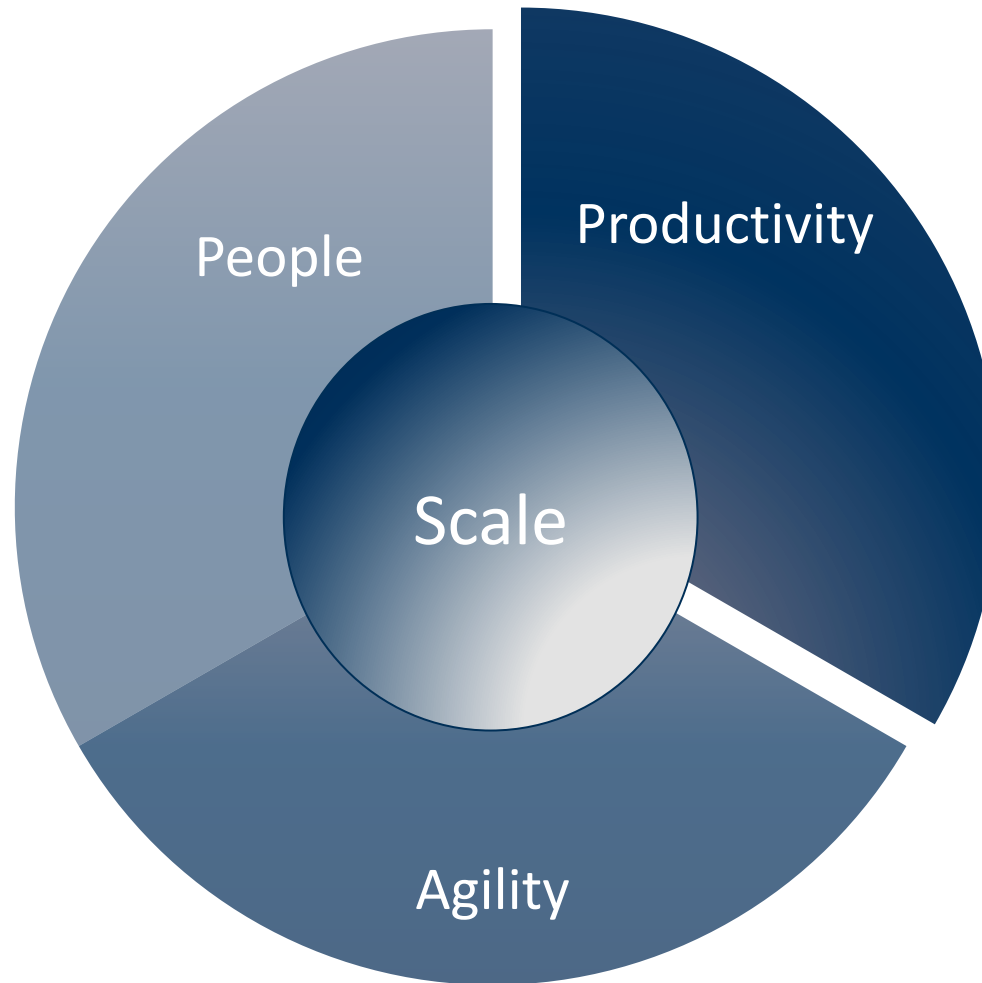
- Minimize the work that users have to do to satisfy the system
- Maximize the work that the system does for the users
- Compliance as a byproduct of great design
- “Make the right thing the easy thing.”

### **Guiding Principles**

#### **Pay attention to the user experience**

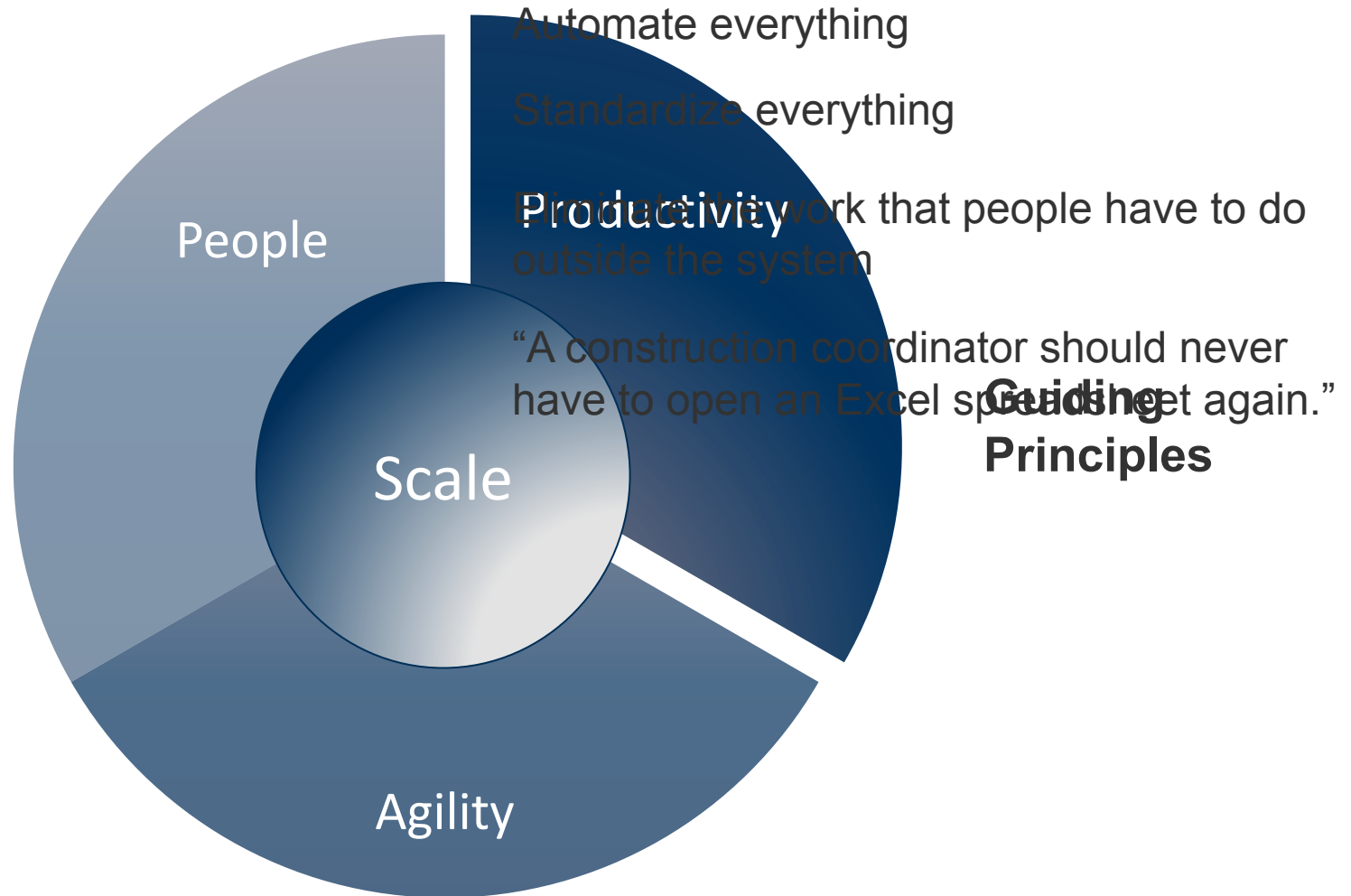
- Eliminate the need for users to become experts in how PRISM works
- Eliminate the need for users to have to understand and comply with business process nuances
- Modern, intuitive user interface
- In-application help
- Training, training, and more training
- Help desk

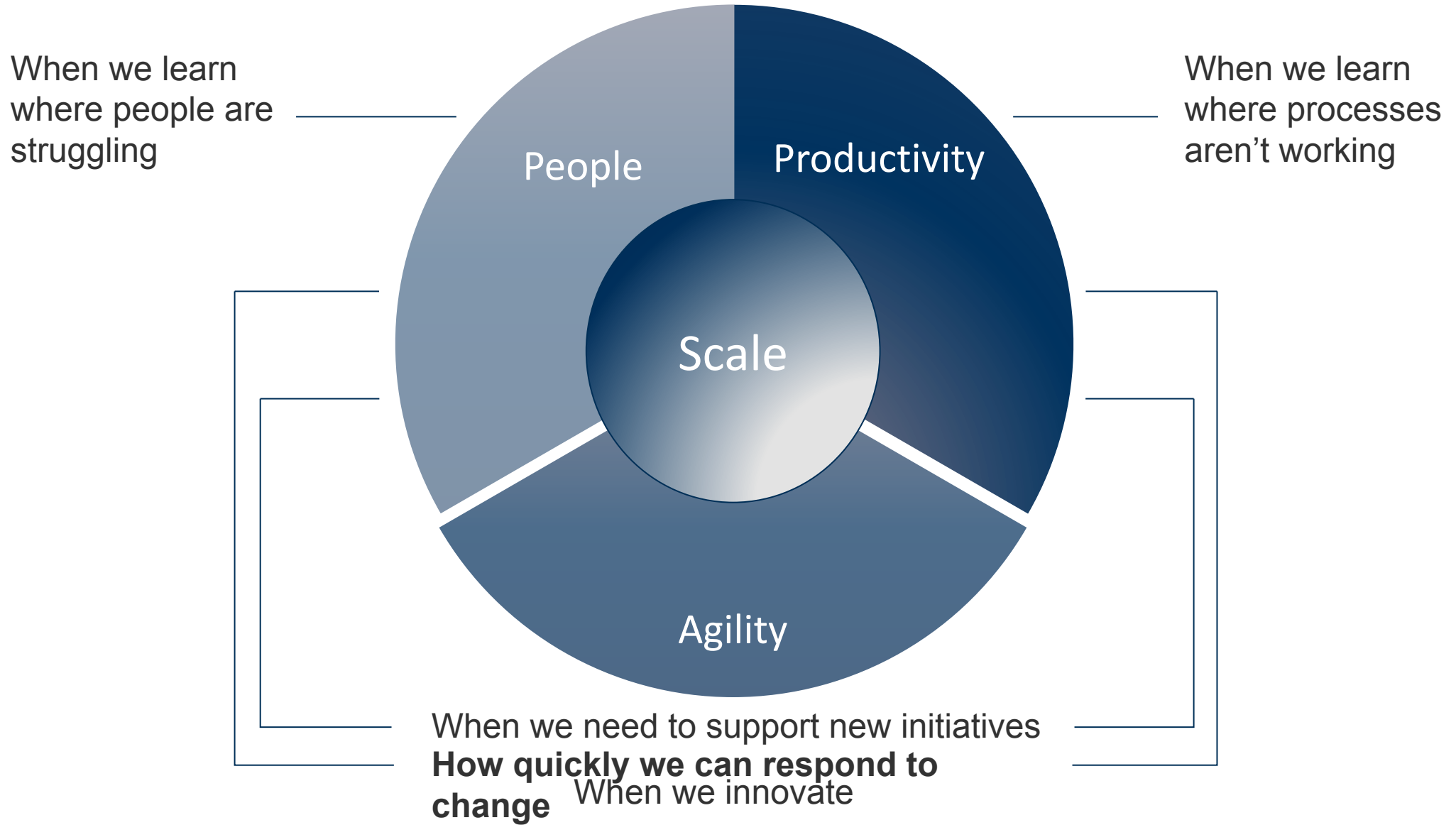




Scale cannot be achieved by simply throwing more people at the problem.

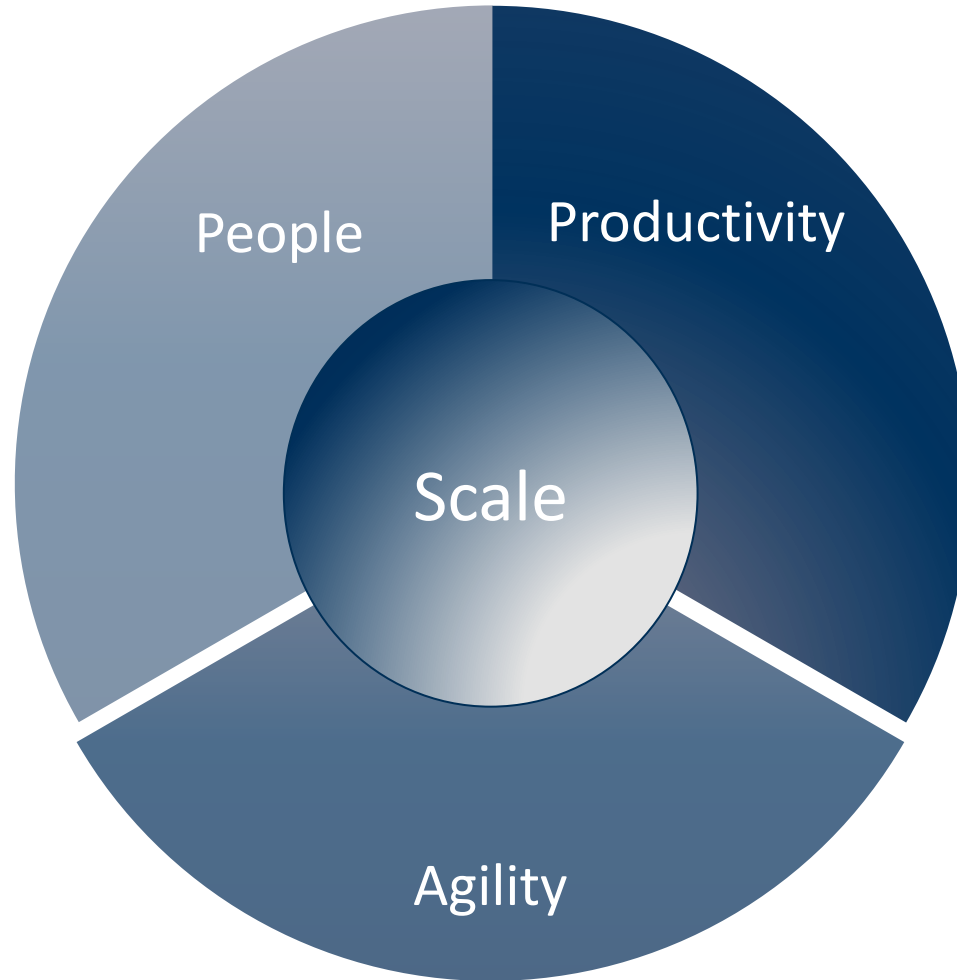
It can only be achieved by improving productivity.





**Architect to facilitate change**

**Design to *anticipate* change**

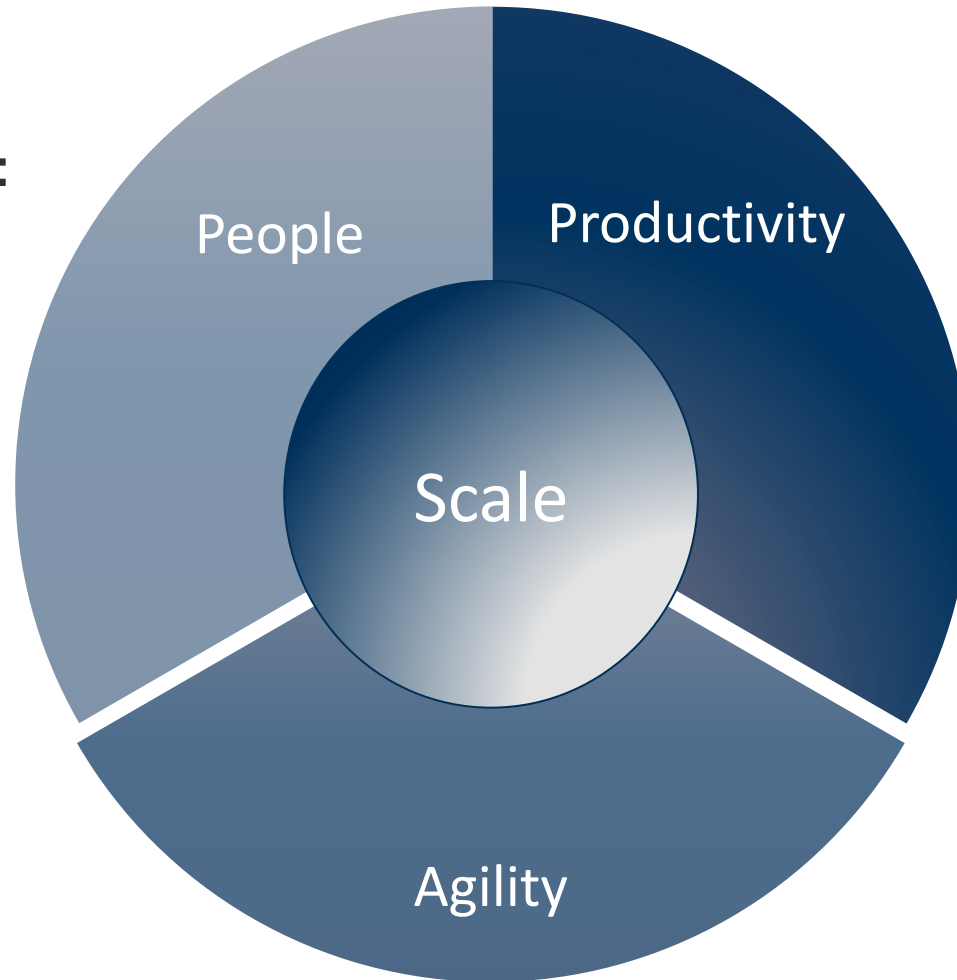


**Pay attention to the business/IT partnership**

**Guiding Principles**

## Architect to facilitate change:

- **Patterns and practices followed**
  - Microservices architecture
  - Automated testing
  - Continuous integration
  - Continuous delivery
  - Containerization
- **Technologies employed**
  - Angular
  - BP3 Brazos Task Manager
  - Red Hat Decision Manager
  - Camunda
  - Kafka
  - Elasticsearch
  - Oracle Database
  - Kubernetes



## Design to *anticipate* change:

- Emphasize configurability
- Design and implement modular business processes
- Externalize business rules

## Pay attention to the business/IT partnership:

- Methodologies
- Processes
- Tools

Thank you!  
Questions?

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