Strategic Value of Process Simulation

What it is

How it can improve lean operations

Where it can be applied

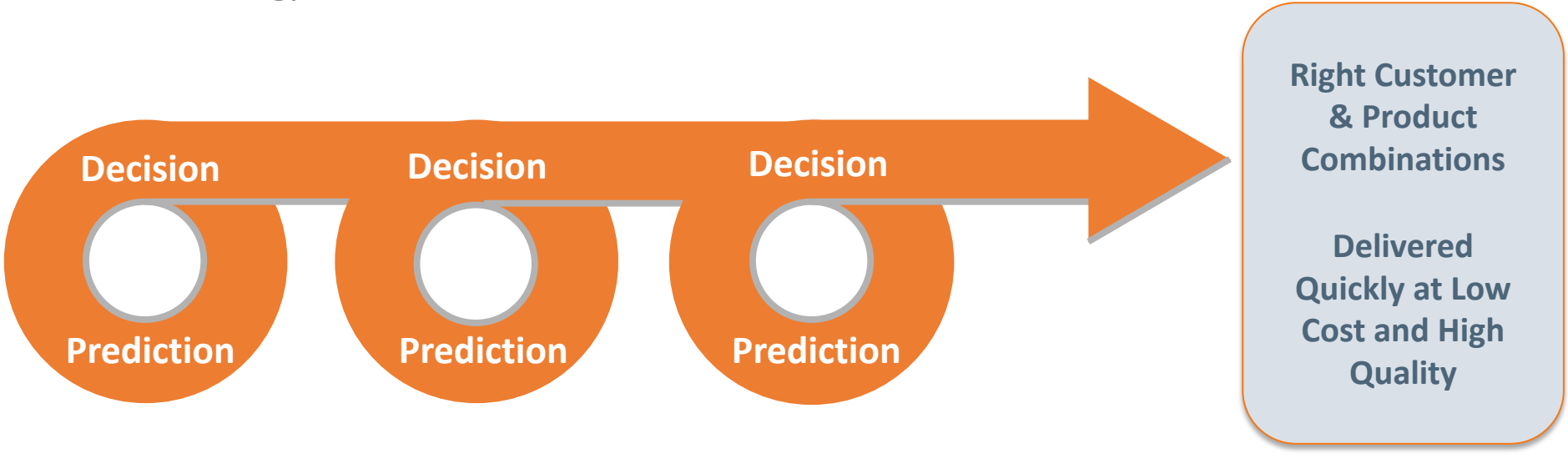
What is the Strategic Value of Process Simulation?

Any business strategy drives 2 objectives:

1. Offering the **right products** & services to the **right customers**
2. Delivering them as **efficiently** as possible

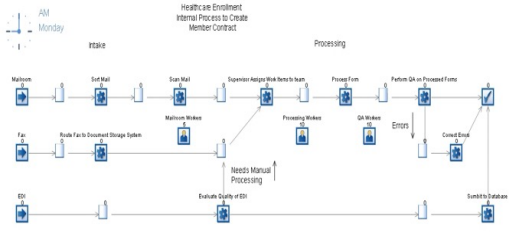
These objectives can be broken down into multiple cycles of prediction, evidence, and decision.

Simulation accelerates those cycles faster, cheaper, and more accurately to propel data driven business strategy execution.

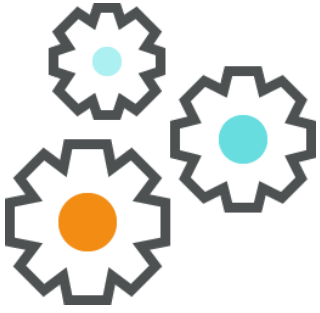


What Does Simulation Do?

Simulation is a modeling approach for optimizing processes and making evidence-based decisions driven by real operational data. It allows users to test outcomes of scenarios without risking the larger expense of new process implementation.



Simulation models build a visual mock-up of your process…



…and use operational data to quantitatively represent the performance of an existing or proposed process…

…then surface and predict the process approach that delivers the optimal results…

…and develop compelling business cases for funding for future process improvement initiatives

What Business Value Can Simulation Provide?

A **data-driven** process simulation approach can be used as a **strategic decision accelerator** across **common but critical** processes using operational and financial factors

OPERATIONAL

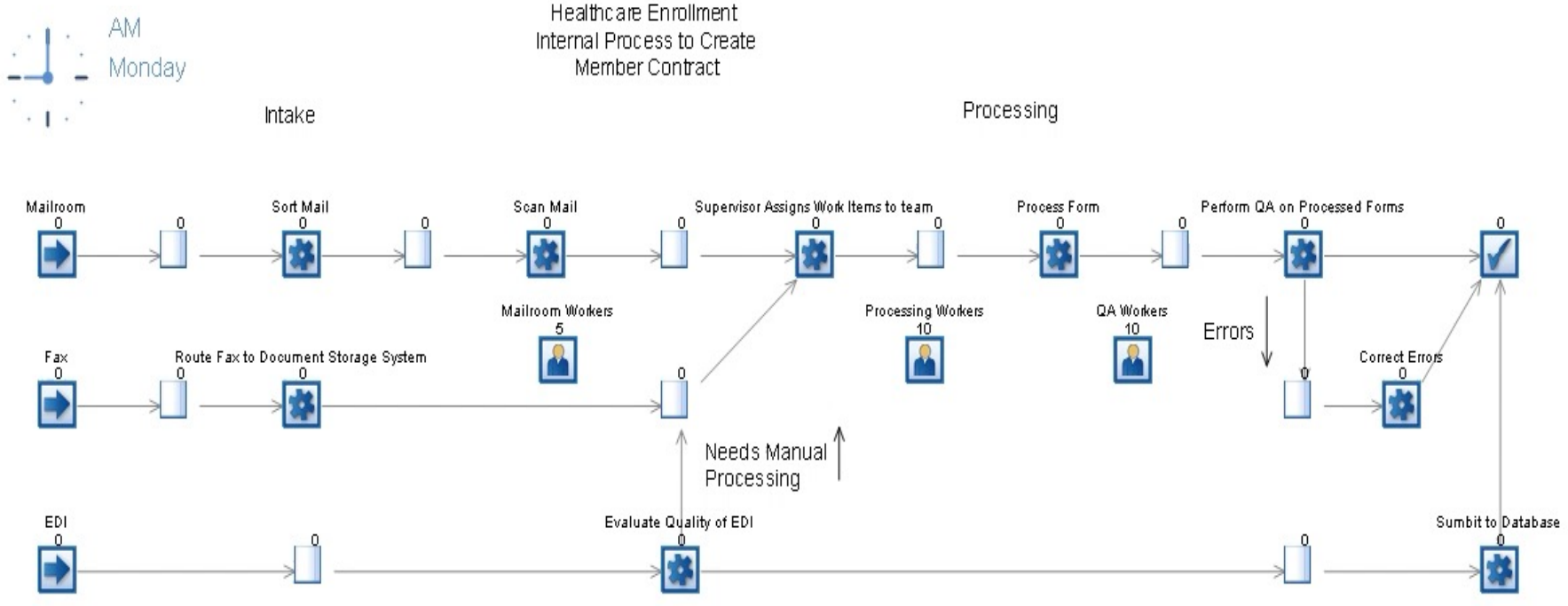
- Simulation is less costly than real life implementation
- Test different operational ideas under the same circumstances
- Determine throughput impacts across varying timeframes
- Drive staffing & fulfillment decisions using impartial data-driven insight

FINANCIAL

- Facilitate materials & staffing cost forecasts
- Predict product revenue resulting from what-if scenarios
- Calculate ROI on projects before investing
- Improve stakeholder communication and build buy-in

Case Example: Simulation Modeling Driving Enrollment Process Optimization

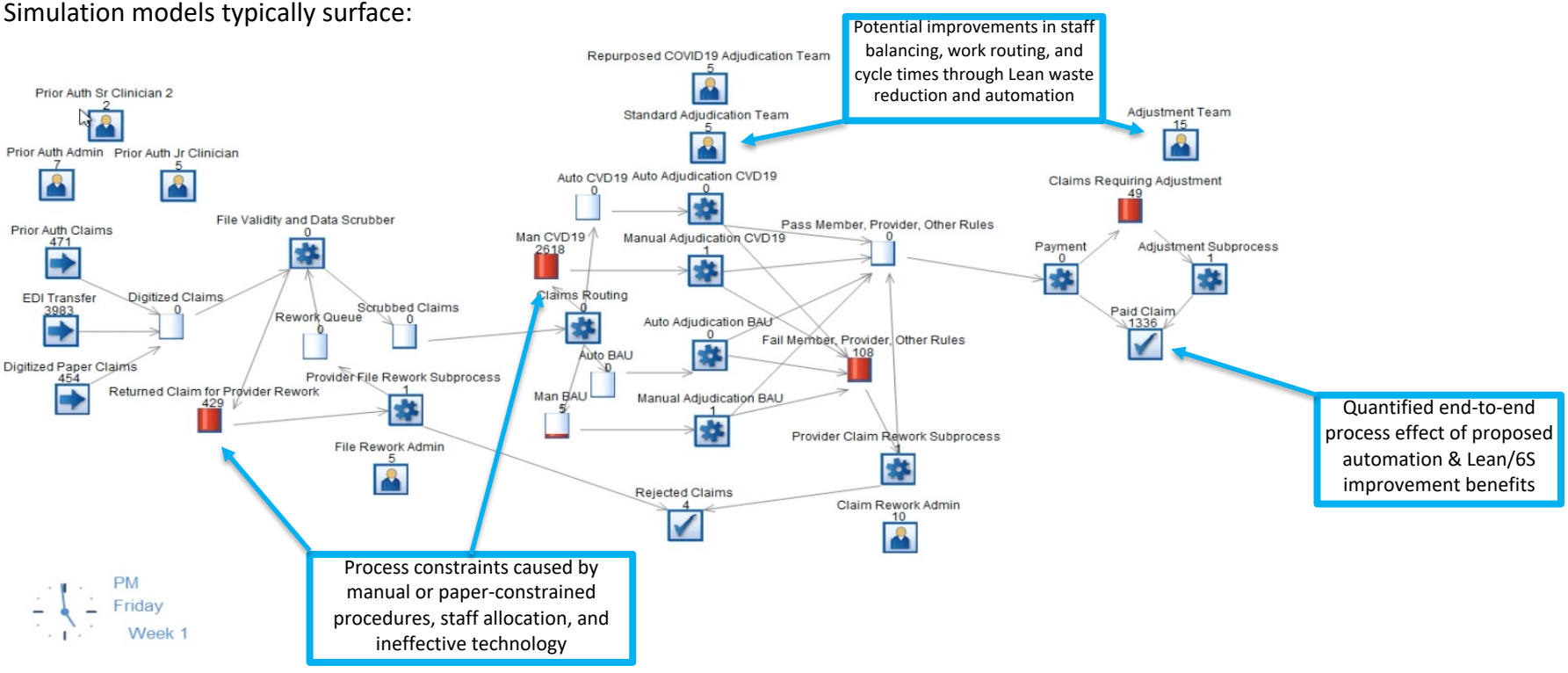
Data-driven process simulation models to provide measurable actionable insights to stakeholders. They drive process cost reduction, throughput, staffing, and revenue-based decisions. A dynamic enrollment simulation model example here shows the workflow queues building in front on constrained activities.



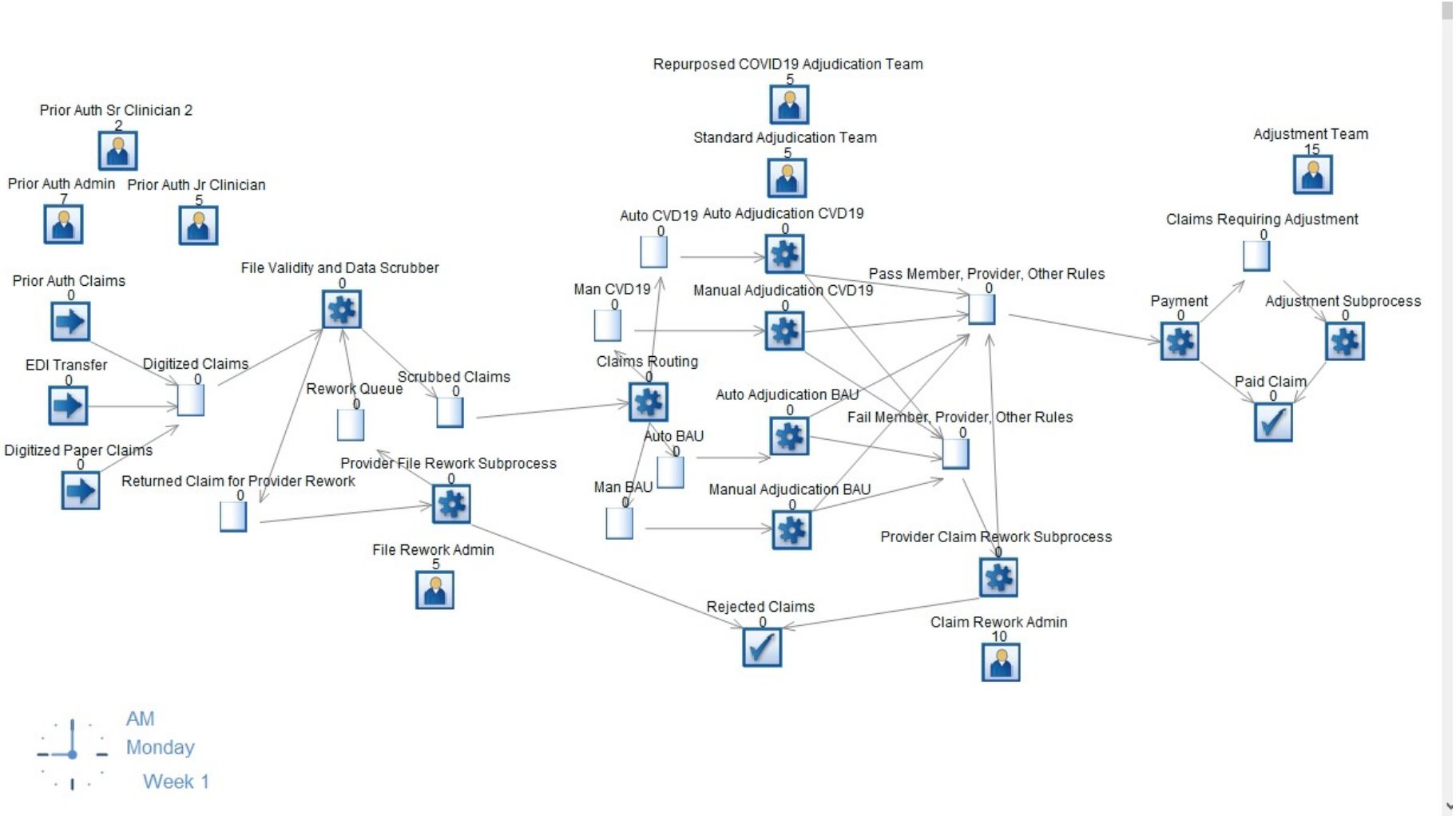
Case Example – Process Impacts of a Pandemic on Claims Payments

A claims adjudication & payment example model here shows the graphically visible constraint points and potential root causes to further explore.

Simulation models typically surface:



Case Example – Dynamic Simulation Modeling Impacts on Claims Payments



Example Outputs From Simulation Projects

Rec. Number	Recommendations (in compounding order)	Reg. Season Cycle Time	Open Season Cycle Time
0	Current State	5.86	3.74
1	QA Recon Pilot Study	5.82	3.72
2	Bad Address Process Improvement	5.76	3.78
3	In-house mailroom or External	5.82	3.81
4	Reduce EDI suspends	5.71	3.38
5	Upgrade OCR for form classify & route	5.78	3.37
6	Bot Doc Processing for EDI Suspends	5.26	3.96 (Short Term)
7	Digital Mailroom: ICR prepopulaton	3.69	3.05 (Long Term)
8	Integrated OPL Processing	3.26	3.02
9	Integrated workflow with automated business rules & UI	2.87	3.05
10	Maximize EDI intake	2.08	3.32

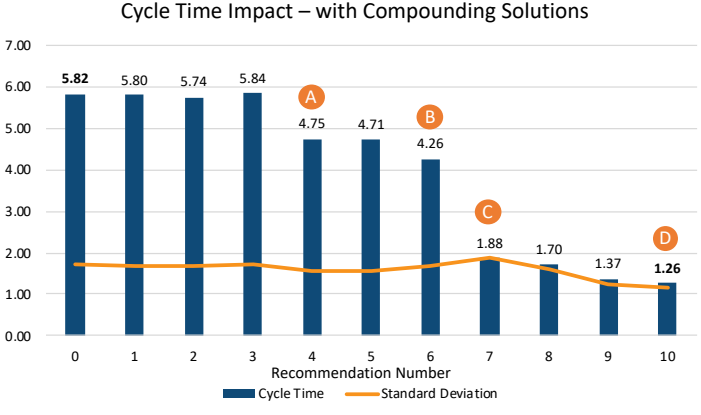
Simulation Metric	Current State - Regular Enrollment Volume	Short Term Future State - Regular Enrollment Volume	Short Term Future State - Open Enrollment Volume
Resource Allocation (Total)	**30**	**30**	**30**
Data Intake (Enrollment / Mail Tech)	8	8	8
Enrollment Processing (w/ OPL)	12	12	12
QA	10	10	10
Resource Utilization (Average)	**83%**	**64%**	**89%**
Data Intake (Enrollment / Mail Tech)	59%	64%	74%
Enrollment Processing (w/ OPL)	100%	100%	100%
QA	91%	91%	92%
Average Cycle Time - Intake to Fulfillment (days)	**5.82 (SD: 1.71)**	**4.26 (SD: 1.69)**	**7.02 (SD: 1.69)**
Total Items Processed	17,039	17,542	18,490
Items Remaining in Queues	3,679	1,484	14,000

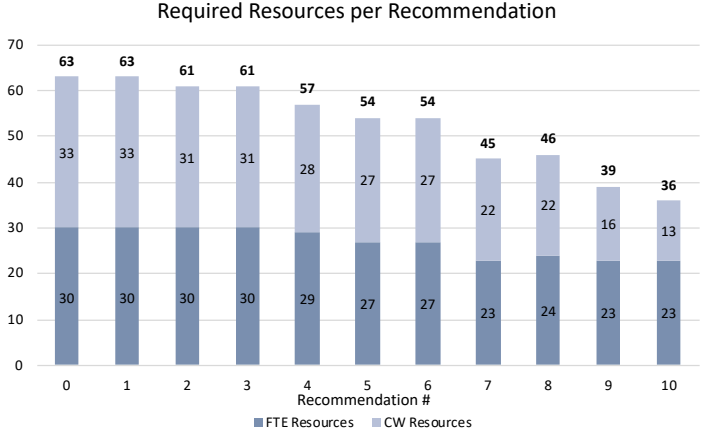
A Prior recommendations reduce utilization in Enrollment intake, but do not address Enrollment processor backlog

B Intelligent Character Recognition (ICR) has major impact on average time, but causes std. dev to rise

C Changes in UI and integration of TPL work and resources reduced standard deviation

D The overall impact of recommendations – 78%-time savings in future state





More to Examples to Come...

01 Introduction and Objectives

02 What is Process Simulation?

03 Process Simulation in Practice

04 Best Practices

05 Example Use Cases and Case Studies

Conclusion

Predict the Future – Reduce Today's Risk

Use process simulation as a **data-driven** way to **predict** planned process **outcomes before** you **invest big** in **Lean process change** or **automation**

Meet Our Optimity Presenters

Scot Alexander, Managing Director

Scot Alexander has 25 years experience delivering solutions impacting customer, partner, and employee experience. He focuses on the engagement management and business architecture within health payer, provider, and life sciences industries. Scot has led multiple programs redesigning benefit products, broker sales channels, and core administration platforms. Specifically, he has led engagements to stand up new healthcare payer operational models, IT systems, and business processes - implementing customer intake to enrollment, medical management, claims payments, and customer service. Additionally, Scot brings cross-industry Industrial Engineering perspective and solutions from consumer goods manufacturing, distribution, and retail operations.

Luke Hermiston, Senior Manager

Luke Hermiston has experience supporting governments and companies in healthcare, retail, technology, and insurance through process improvement initiatives. Efforts include designing and implementing emergency care service networks and developing models and budget estimates for nation wide healthcare transformation rollout in The Kingdom of Saudi Arabia. Luke has worked on process documentation and simulation model development for insurance enrollments operations for lean process improvement efforts. Additionally, Luke has experience managing the selection and implementation of a range of operations improving technologies including Business Process Management (BPM) and Project Portfolio Management (PPM) packages.