ACHIEVING OPERATIONAL EXCELLENCE WITH AI AND MACHINE LEARNING

Operational excellence enables an enterprise and its leadership to continuously improve all areas of performance, , including decision-making, ongoing investment, profitability, customer and partner services and human resources capabilities.

NeXTea
nterprise cademy
PRESENTA
Innovation Gate Seminars

By **Faisal Hoque**
founder of:

SHADOKA

[Image: Flickr user Jonathan Bliss]

AGENDA

- **FUNDAMENTALS**
- AI AND MACHINE LEARNING
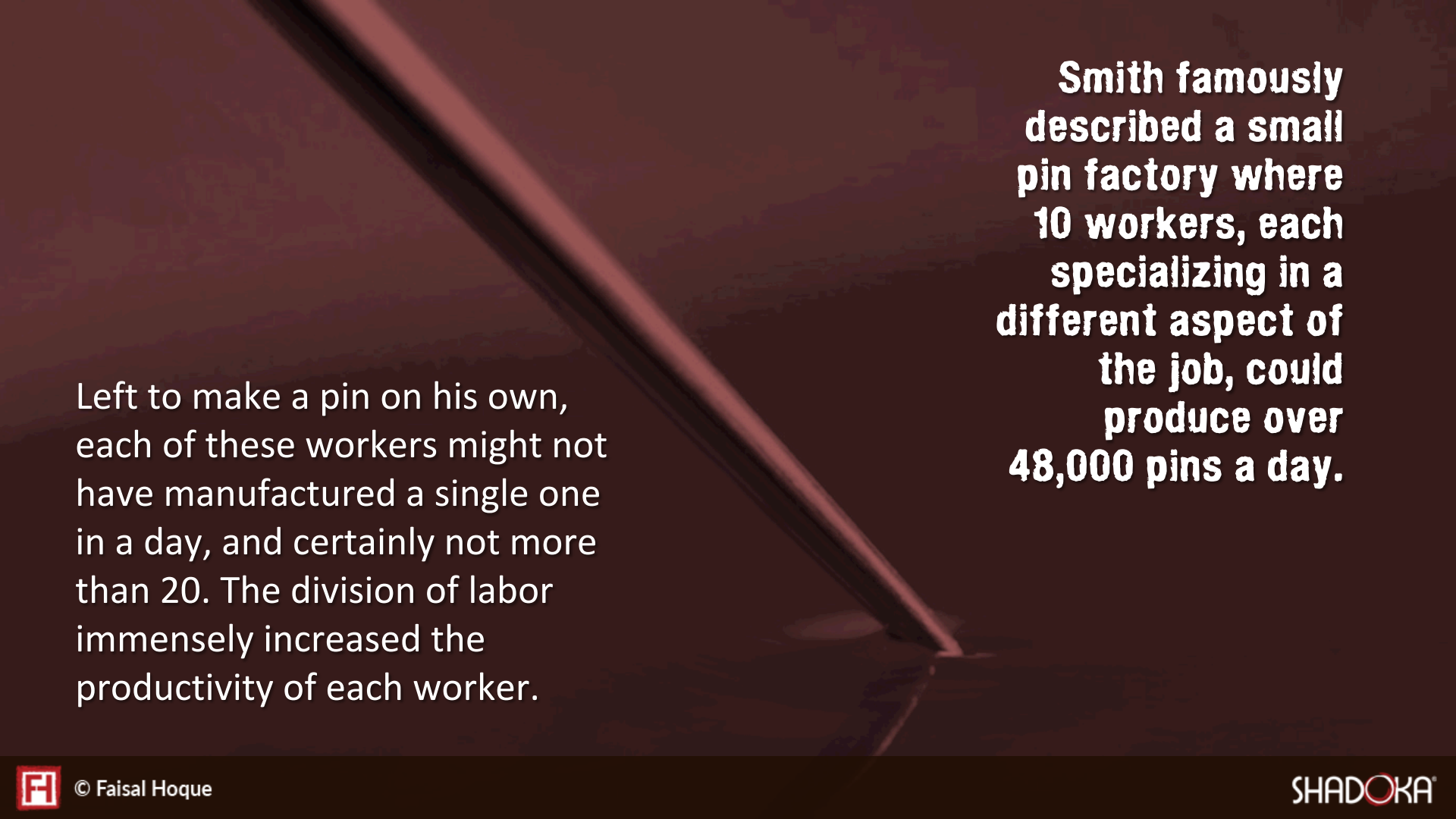- ROADMAP
- MANAGING RISK
- CONCLUSION

SHADOKA

Operational excellence had its genesis in manufacturing dating back to the pre-Industrial revolution.

SHADOKA®

In his 1776 magnum opus, *The Wealth of Nations*, economist and philosopher Adam Smith was among the first great thinkers to define this now widely used concept...

SHADOKA

Smith famously described a small pin factory where 10 workers, each specializing in a different aspect of the job, could produce over 48,000 pins a day.

Left to make a pin on his own, each of these workers might not have manufactured a single one in a day, and certainly not more than 20. The division of labor immensely increased the productivity of each worker.

It's still true today that assigning different roles and responsibilities across an enterprise enables scale, lowers costs and leads to greater operational efficiencies.

Delivering continuous improvement in the marketplace among competitors and customers requires enterprises to identify, understand and create the capabilities, behaviors and focuses necessary for repeatable, continuous and measurable operational improvement.

SHADOKA

AGENDA

- FUNDAMENTALS
- AI AND MACHINE LEARNING
- ROADMAP
- MANAGING RISK
- CONCLUSION

SHADOKA®

AI and Machine Learning is a natural fit for Operational Excellence...

SHADOKA

$62 billion is lost through poor customer service—a deficit that continues to increase with every passing year. AI can help plug that leak by going above and beyond what humans are able to do.

- Machine learning helps companies like Uber determine arrival times for rides, estimate meal delivery times on UberEATS, and compute optimal pickup locations.

- Google uses deep learning for voice and image recognition algorithms.

- Amazon employs it to help determine what customers want to watch or buy next.

SHADOKA
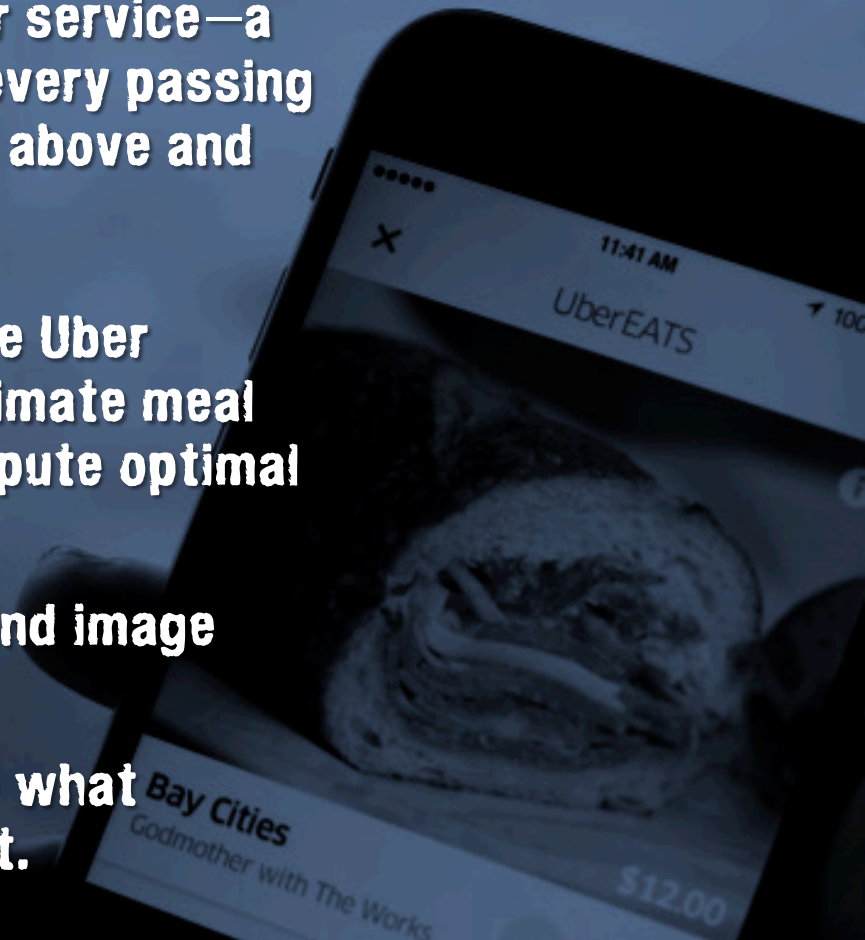
AI and machine learning have the potential to significantly reduce and contain ongoing operational costs for public sector agencies. Consider the following examples:

- US Army's Medical Department is developing wearable monitors that use a machine-learning algorithm to weigh the potential seriousness of wounds, to assist medics in prioritizing treatment or evacuation.

- The White House and US Customs and Immigration Services use chatbots designed to answer basic questions and leave complicated responses to a human.

- The US Postal Service uses handwriting recognition to sort mail by ZIP code; some machines can process 18,000 pieces of mail an hour.

SHADOKA

Being operationally excellent requires a focus on management capabilities to develop and promulgate standards, coordinate decision-making, optimize service delivery and to manage the workforce.

SHADOKA

AGENDA

- ## FUNDAMENTALS
- ## AI AND MACHINE LEARNING
- ## ROADMAP
- ## MANAGING RISK
- ## CONCLUSION

SHADOKA®

Roadmap For Operational Excellence Journey

Orchestrating these capabilities requires a unification of cross-functional management disciplines.

These capabilities can be organized around the five core characteristics...

SHADOKA

1. Visualize Key Operational Processes.

Identify the key operational processes, including those that create value, growth or innovation as well as those that consume the most resources, time and assets. Develop visual operating models that show linkages both inside the enterprise as well as outside, to customers, suppliers and partners.

SHADOKA

2. Design Workflow and Predefined Responses.

Model the workflow for each key process, identifying the actions, resources and workers required for each step. Then define a standard response to handle large variations in workflow volume outputs or inputs.

SHADOKA

3. Develop Metrics and Gauges.

Establish measures for normal workflow and develop systems or methods that report workflow volume outside the normal ranges. Ensure that workflow reports are received by the stakeholders responsible for each operation.

SHADOKA

4. Operate Functionally, Measure Systemically.

The functional operating manager responsible for workflow, using the predefined responses, operates the workflow by making any changes necessary to adapt to changing volume, inputs or outputs. Functional managers interact with upstream and downstream operating mangers to ensure optimal end-to-end performance.

SHADOKA

5. Drive Continuous Improvement.

As operating experience grows, make adjustments to the workflow design, predefined responses and performance measures, to continuously improve overall system performance.

SHADOKA®

AGENDA

- ## FUNDAMENTALS
- ## AI AND MACHINE LEARNING
- ## ROADMAP
- ## MANAGING RISK
- ## CONCLUSION

SHADOKA

Managing Operational Risks

To manage most business operations, enterprises must cultivate a culture of risk management that is vigilant in its pursuit and disciplined in its execution.

"Systemic operational risk originates in the complex interactions among the components that constitute a system. An individual component can function flawlessly while the overall system experiences a massive failure, or the system functions as an impact multiplier, magnifying the effect of a single component failure."

SHADOKA

Step 1: Identify The Risks.

Operational risk identification is the process of identifying of sources of risk from all directions, internal and external. Risk identification is an inherently creative process, and as such, it requires the collaboration of diverse minds and different perspectives that represent all constituencies.

SHADOKA

Step 2: Establish A Control System.

Risk mitigation is an analytical process that devises a control system to mitigate each identified risk. Control systems range widely. They can be designed to respond to a risk event, to reengineer the process to eliminate or transfer the risk, or to detect the risk early, before it can cause significant damage.

SHADOKA®

Step 3: Test, Test, And Test Again.

Control systems require compliance to be effective, and testing simulates risk events and the control-system response. Test results are fed back into improved and more effective control systems; they also serve to identify new sources of risk, each of which requires a corresponding control system.

SHADOKA

AGENDA

- ## FUNDAMENTALS
- ## AI AND MACHINE LEARNING
- ## ROADMAP
- ## MANAGING RISK
- ## CONCLUSION

SHADOKA

As information becomes more plentiful and less centralized, more organizations are likely to decentralize, too.

Technological transformations will continue to reshape the way the business world is organized.

SHADOKA

The wave of connectivity

will be guided by **four rules**:

◇ Anything that can be **digitized** will be.

◇ Anything that can go **wirelessly** will.

◇ Anything that can get **smaller** will.

◇ And everything, seemingly, will want to be **'free'**.

Faisal Hoque

SHADOKA

Assess, Learn, Grow, Monitor

Transformational journey towards operational excellence requires constant assessment, learning, growth, and monitoring of:

1) People and Culture;
2) Capacity and Capabilities;
3) Innovation; and
4) Technology.

SHADOKA

About SHADOKA

Shadoka enables aspirations to lead, innovate, and transform. Shadoka's accelerators and solutions bring together the management frameworks, digital platforms, and thought leadership to enable innovation, transformation, entrepreneurship, growth and social impact.

We bring together the management frameworks, digital platforms, and thought leadership for:

- **Evaluation, execution, and monitoring of programs**
- **Scaling sales, revenue, and profitability**
- **Creation and management of digital communities and marketplaces**

Follow us @shadokaventures

shadoka.com

SHADOKA

About Me

Founder of Shadoka

A *Top 100 Thought Leader.* A *Top 100 Most Influential People in Technology*. Founder, CEO, Chairman, and/or board member of multiple international companies. Author of multiple publications on leadership, entrepreneurship, management, innovation, and mindfulness. A regular, top contributor to *Fast Company, Business Insider, Medium, and other publications* with thousands of viral social media followers from around the globe.

Follow me @faisal_hoque
faisalhoque.com

SHADOKA