## "Get your kicks on Route 66"

### **ROUTE 66 TO DEVOPS**



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### YOUR TOUR GUIDE TODAY DASA DEVOPS AMBASSADOR -SARI ALANDER



**DASA** is an independent and open, members driven association supporting the development of DevOps training and certification to the global market. Advocating the development of **High-Performance IT Professionals and Teams** through agile DevOps initiatives.









## What is DevOps?

"DevOps isn't a thing. It's not a product, standard, specification, framework or job title. DevOps is about experiences, ideas and culture to create High-Performing IT Professionals and Teams"

#### Fundamentally

DevOps is the ultimate search for Flow across IT and Business



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## What Do All of These Have in Common?













**DVD Rental Service** 

Student Bulletin Board

Bookstore

Search Engine

Online Marketplace

Transportation Network

#### They Radically Changed their IT Culture from Traditional IT to DevOps





## **WHY DEVOPS?**

DevOps Organization Common Culture Micro-Services Cloud services Common sharing Autonomous Self Directing teams Common goal High Performing Teams Fail Fast –Learn Fast Customer first Communications

Organizational Silos Different Mind-sets Different Implementations Different Tools Lack of Interest in Learning Other Tools Different Environments Loss of Work Blame Game Build Rollback Disintegrated Processes No Feedback Loop

Challenges



## **DevOps Core Principles**

Customer-Centric Action

> *Courage Innovate*

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Create with the End in Mind

Product and Service Thinking Engineering Mindset Collaborate

Cross-Functional Autonomous Teams

T-shaped Profiles Complimentary Skills Continues Improvement

*If it Hurts, Do it more Often Fail Fast Experiment*  End-to-End Responsibility

*Live Your accountability Concept to Grave Performance Support* 

> Automate Everything You can

Enhance Quality Maximize Flow



## **BRIGHT FUTURE - DEVOPS RESULTS**



source: State of DevOps report - https://devops-research.com/



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## CULTURE

Behavior "How You act"

Attitudes

"How You express your values and beliefs"

Values

"What You value or think is important"

**Beliefs** 

"Ideas that you hold true, even if unproven or irrational"





#### "Customers will never love a company until the employees love it first."

– Simon Sinek, author, Start with Why



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The terms motivation is derived from the Latin word "movere" which means "to move" or "to energize" or "to activate".







## **Agile Principles**

- 1. Customer satisfaction through early and continuous software delivery– Customers are happier when they receive working software at regular intervals, rather than waiting extended periods of time between releases.
- 2. Accommodate changing requirements throughout the development process The ability to avoid delays when a requirement or feature request changes.
- 3. Frequent delivery of working software Scrum accommodates this principle since the team operates in software sprints or iterations that ensure regular delivery of working software.
- 4. Collaboration between the business stakeholders and developers throughout the project Better decisions are made when the business and technical team are aligned.
- Support, trust, and *motivate the people involved Motivated teams are more likely to deliver their best work* than unhappy teams.
- 6. Enable face-to-face interactions Communication is more successful when development teams are co-located.

- Working software is the primary measure of progress Delivering functional software to the customer is the ultimate factor that measures progress.
- 8. Agile processes to support a consistent development pace Teams establish a repeatable and maintainable speed at which they can deliver working software, and they repeat it with each release.
- 9. Attention to technical detail and design enhances agility The right skills and good design ensures the team can maintain the pace, constantly improve the product, and sustain change.
- 10. Simplicity Develop just enough to get the job done for right now.
- 11. Self-organizing teams encourage great architectures, requirements, and designs – Skilled and *motivated team members who have decision-making power*, take ownership, communicate regularly with other team members, and share ideas that deliver quality products.
- 12. Regular reflections on how to become more effective Selfimprovement, process improvement, advancing skills, and techniques help team members work more efficiently.



## Conway`s Law

"Any organization that designs a system (defined more broadly here than just information systems) will inevitably produce a design whose structure is a copy of the organization's communication structure."





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#### **Manifesto for Agile Software Development**

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over processes and tools Working software over comprehensive documentation Customer collaboration over contract negotiation Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.





## Lean Six Sigma: 8 Wastes



#### Defects

Effort caused by rework, scrap, and incorrect information.



#### Overproduction

Production that is more than needed or before it is needed.



## **Waiting**

Wasted time for the next step in a process.



#### Non-Utilized Talent

Underutilizing people's talent, skills & knowledge.



#### Transportation

Unnecessary movements of products & materials.



#### Inventory

Excess product and materials not being processed.



#### Motion

Unnecessary movements by people (e.g. walking).



#### Extra-Processing

More work or higher quality than is required by the customer.



## AUTOMATE EVERYTHING YOU CAN







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"If you can't measure, you can't improve! A successful DevOps implementation will measure everything it can as often as it can... performance metrics, process metrics, even people metrics."

-John Willis



## What do you want to measure?

#### **PERFORMANCE METRICS**

- Output oriented
- Focus on pass performance
- Easy to measure
- Hard to improve or influence

#### **EXAMPLES**

- Velocity
- Defects
- Code quality

#### **PERFORMANCE PREDICTORS**

- Input oriented
- Focus on future performance
- Hard to measure
- Easier to influence

#### **EXAMPLES**

- Burndown Chart
- Cycle time (Control Chart)
- Cumulative Flow (WIP)



**VERSUS** 







## **Continuous Improvement**

- Deming cycle PDCA (Plan-Do-Check-Act)
- DMAIC (Define-Measure-Analyze-Improve-Control)
- Kaizen
- Etc.





## All coming together

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Katrina Clokie's way of viewing DevOps from a tester's point of view, from her book, "<u>A Practical Guide to Testing in DevOps</u>"



## DASA Competence Framework with Qualification



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# Each Team Member Contributes their Skills and Knowledge to the overall Competencies of a DevOps Team



## **Team based competence model**

Knowledge Areas	Skills Areas
Business Value Optimization	Courage
Business Analysis	Teambuilding
Architecture & Design	DevOps Leadership
Programming	Continuous improvement
Continuous Delivery	
Test Specification	
Infrastructure Engineering	
Security, Risk & Compliance	



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1- Novice / 2- Competent / 3- Proficient / 4 - Expert / 5 - Master





Start with **Why**?

# Retro

Decide What do You need to do?

Continues Improvements Find out **How** would You ensure right **Skills** to do what you need to do?





# **Thank You**







**KNOWIT HAS OFFICES** in Sweden, Norway, Finland, Denmark and Germany



#### THE COMPANY IS LISTED

on the Nordic Exchange in Stockholm



in 1990









## AGE OF EMPLOYEES







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Quality assurance & testing

Robotic Process automation

Digital solutions

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