DEVOPS?! GERNE, Aber richtig!
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doing DevOps since 2013
consulting organizations & teams on DevOps
customers in industry and public sector
WE SHAPE
THE DIGITAL FUTURE
OF GERMANY.
FOCUSING ON PUBLIC SERVICES
"HOW WILL WE IMPLEMENT DEVOPS IN OUR ORGANIZATION?"

- unnamed C-level manager
BY DEVELOPING CULTURE, REMOVING BOUNDARIES AND IMPLEMENTING PROVEN CONCEPTS.
"BUT HOW DO WE MEASURE THIS ON AN ORGANIZATIONAL SCALE?"

- unnamed C-level manager
RIP Grumpy Cat
OKAY… THAT WAS… SLIGHTLY OVERSTATED…
DEVOPS HOPE
fast feature development & deployment
stable production
satisfied employees
reduce burnout

Photo by Kristopher Roller on Unsplash
SOFTWARE DELIVERY PERFORMANCE

as the key performance indicator contains

• delivery lead time to change
• deployment frequency
• mean time to restore
• change fail rate
HIGH PERFORMING DEVOPS ADOPTERS

- deploy 46x more frequently
- lead time from commit to deploy is 440x faster
- mean time of recovery from downtime is 170x faster
- change failure rate is 5x lower

High performers vs. low performers
Source: Accelerate: State of DevOps 2018
"DEVOPS PRACTICES RAISE THE VALUE TECHNOLOGY ORGANISATIONS DELIVER TO THEIR BUSINESS"

- intuition
ASSESSING YOURSELF
LEAD TIME TO CHANGE & MEAN TIME TO RESTORE

- less than an hour
- less than one day
- between one day and one week
- between one week and one month
- between a month and six month
- more than six month
DEPLOYMENT FREQUENCY

- on demand (multiple deployments per days)
- between once per hourly and once per day
- between once per day and once per week
- between once per week and once per month
- between once per month and once every six month
- fewer than once every six month
CHANGE FAIL RATE

% of rolled back deployments & bugs.
IMPROVING SOFTWARE DELIVERY PERFORMANCE
CAPABILITIES, NOT MATURITY.

Maturity models describe a static path & finished state. Which doesn't fit to DevOps. DevOps evolves every single day.
5 CATEGORIES OF CAPABILITIES

CONTINUOUS DELIVERY

ARCHITECTURE

PRODUCT & PROCESS

LEAN MANAGEMENT & MONITORING

CULTURE
CONTINUOUS DELIVERY
Continuous Delivery

**VERSION CONTROL EVERYTHING**

Code of your application, configuration of your application, script for automation, systems configuration & environment configuration.
Continuous Delivery

FULLY AUTOMATED DEPLOYMENT PROCESS

Deployments without manual interference.
USE CONTINUOUS INTEGRATION

Continuous Delivery

Regular check-ins to code repository and automated tests with fast feedback.
Continuous Delivery

TRUNK-BASED DEVELOPMENT

Short-living feature branches with a simple branching concept, no code freeze-periods necessary through feature toggles.
Continuous Delivery

TEST AUTOMATION

Developers take responsibility for a reliable and automated test suite, testing for real flaws.
Continuous Delivery

TEST DATA MANAGEMENT

Minimal set of test data to drive a test suite, not limited by the number of test executions.
DEVSECOPS - INTEGRATE SECURITY IN SOFTWARE DEVELOPMENT LIFECYCLE

Integrate security in design & testing phase, conduct early security review, enhance security know-how within your teams, use standard libraries & write test, test, test.
Prioritize on keeping software in a deployable state, implement fast feedback on quality & deployability visible to everyone, systems are deployable on demand, any time.
Architecture

LOOSELY COUPLED ARCHITECTURES

Reduce orchestration necessity for test and deployment, work independent of other system providers.
Architecture

EMPOWERED TEAMS

Teams should choose their own weapons, like tools and technologies, no one knows better than the team how they can be effective.
PRODUCT & PROCESS
Product & Process

WORK IN SMALL BATCHES

Teams should slice features & products into minimal batches, to be released in rapid cycles.
Product & Process

COLLECT & IMPLEMENT CUSTOMER FEEDBACK

Making customers satisfied drives team motivation.
Product & Process

VISUALIZE FLOW OF WORK

Teams should understand the flow of work from business to the customer, enabling for example better technical decisions.
Enable the teams to try out new things, create and update specifications during the development process without external approval, encouraging innovation and new value added.
LEAN MANAGEMENT & MONITORING
Lean Management & Monitoring

LIGHTWEIGHT CHANGE APPROVAL PROCESS

Software delivery performance is highly impacted by a lightweight change process, like peer review or pair programming, without an external change advisory board.
Lean Management & Monitoring

MONITOR ACROSS APPLICATIONS & INFRASTRUCTURE TO ENABLE INFORMED BUSINESS DECISIONS

Take action & informed decisions based on data from applications and infrastructure, reduce wrong people being paged (on-call-duty).
PROACTIVELY CHECK SYSTEM HEALTH

Use rate-of-change warnings and thresholds to monitor systems health, preventively detect issues and mitigate early.
Lean Management & Monitoring

ESTABLISH WORK-IN-PROGRESS LIMITS

Work-in-progress limits manage the flow of work to increase actual throughput, automatically.
Lean Management & Monitoring

VISUALIZE WORK TO ALL TEAM MEMBERS TO MONITOR QUALITY AND COMMUNICATION

Create dashboards to monitor quality, work in progress and status to keep all informed.
Support a performance oriented culture

Such a culture is reflected through a highly transparent information flow, trust, high cooperation, bridging between teams & conscious inquiry.

continuousdelivery.com/implementing/culture
ENCOURAGE AND SUPPORT LEARNING

Learning is considered as crucial part of continuous progress & not just an one time investment.
FACILITATE COLLABORATION AMONG TEAMS

Take down traditional silos. Everywhere.
Culture

PROVIDE RESOURCES AND TOOLS THAT MAKE WORK MEANINGFUL

Meaningful work is one key factor for job satisfaction. Provide tools and resources that are needed to do the job the right way. That can be context, empowerment, new skills, or just hardware.
Culture

SUPPORT OR EMBODY TRANSFORMATIONAL LEADERSHIP

The technical and process work, which is essential to DevOps is supported, and strengthened by transformational leadership, which covers vision, intellectual stimulation, inspirational communication, supportive leadership & personal recognition.
DEVOPS IS NOT LIMITED TO SOFTWARE DEVELOPMENT EVERYONE NEEDS TO BE INVOLVED.
START WITH YOUR SOFTWARE DELIVERY PERFORMANCE
Follow the Agile Manifesto

REGULAR RETROSPECTIVES
EXPERIMENT.
FAIL.
LEARN.
REPEAT.
THANK YOU!
SOURCES

Own experience 😊

A typology of organisational cultures