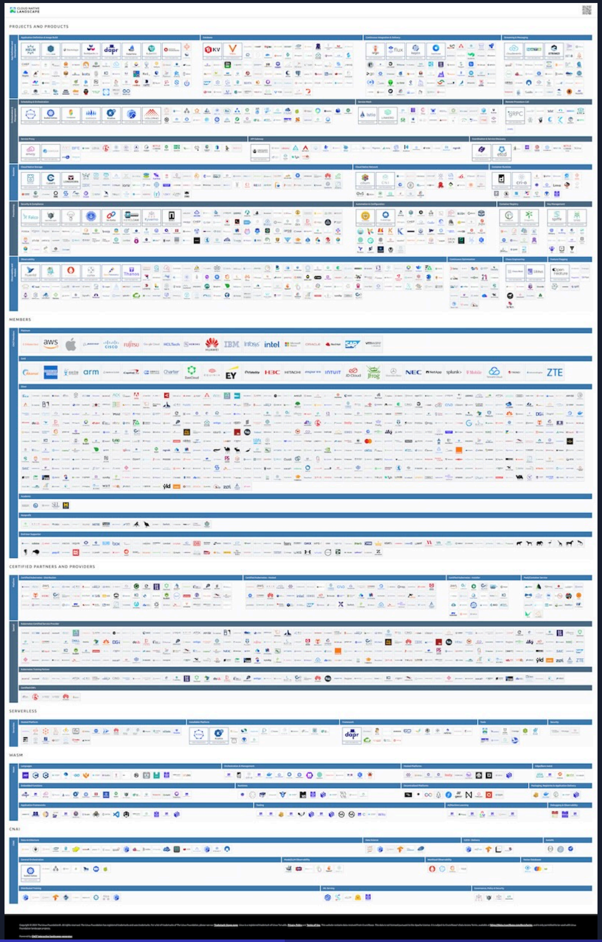
Streamlining DevEx

The Power of CI/CD Standardization and Interoperability


CLOUD NATIVE LANDSCAPE
PROJECTS AND PRODUCTS
MEMBERS
CERTIFIED PARTNERS AND PROVIDERS
SERVERLESS
WASM
CNAI

Jeremy Meiss

DevEx / DevRel Consultant

DevOpsDays Kansas City Organizer

A working definition of DevEx

> *"...the **journey** of developers and practitioners as they learn and deploy technology, which if successful, focuses on eliminating obstacles that hinder them from achieving success in their endeavors."*

-**Jessica West**, *Co-Founder, DevEx Institute*

DevEx
A Good Developer Experience
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OVERL SAFISATON
EFFECIENCY
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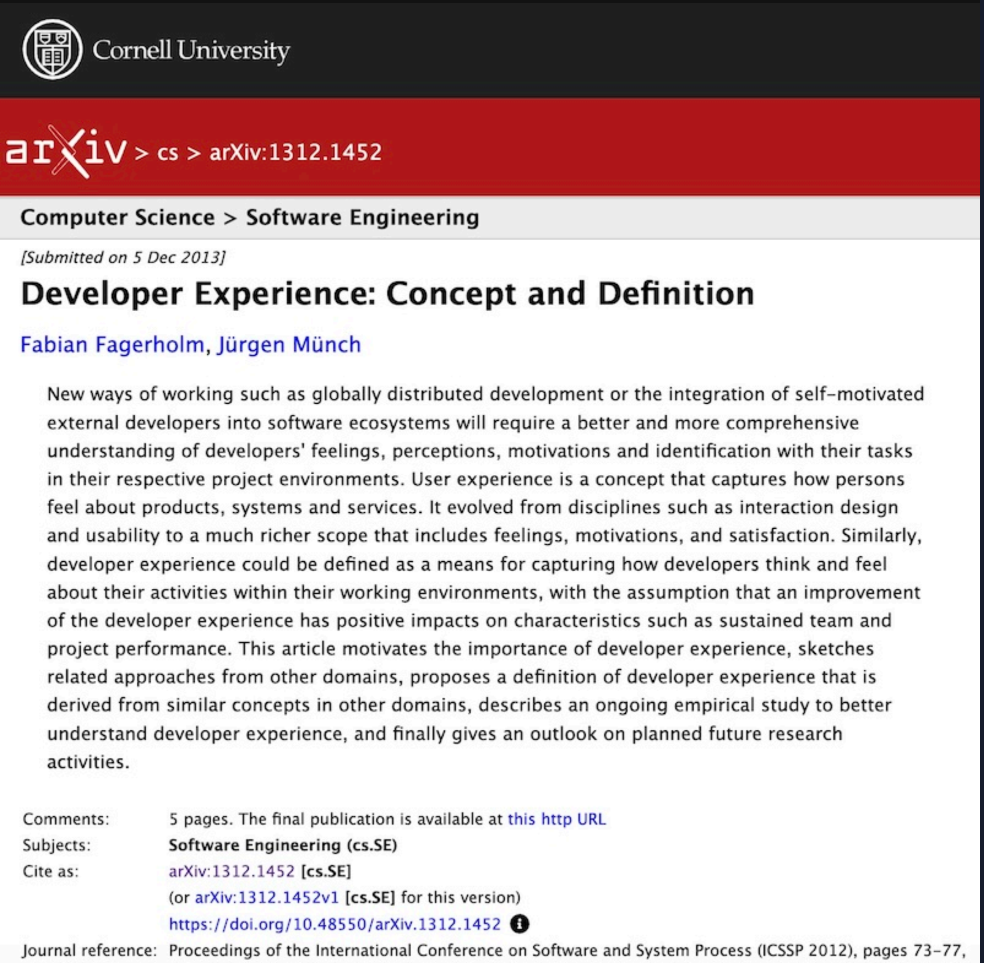

arXiv > cs > arXiv:1312.1452
Computer Science > Software Engineering

[Submitted on 5 Dec 2013]

Developer Experience: Concept and Definition

Fabian Fagerholm, Jürgen Münch

New ways of working such as globally distributed development or the integration of self-motivated external developers into software ecosystems will require a better and more comprehensive understanding of developers' feelings, perceptions, motivations and identification with their tasks in their respective project environments. User experience is a concept that captures how persons feel about products, systems and services. It evolved from disciplines such as interaction design and usability to a much richer scope that includes feelings, motivations, and satisfaction. Similarly, developer experience could be defined as a means for capturing how developers think and feel about their activities within their working environments, with the assumption that an improvement of the developer experience has positive impacts on characteristics such as sustained team and project performance. This article motivates the importance of developer experience, sketches related approaches from other domains, proposes a definition of developer experience that is derived from similar concepts in other domains, describes an ongoing empirical study to better understand developer experience, and finally gives an outlook on planned future research activities.

Comments:	5 pages. The final publication is available at this http URL
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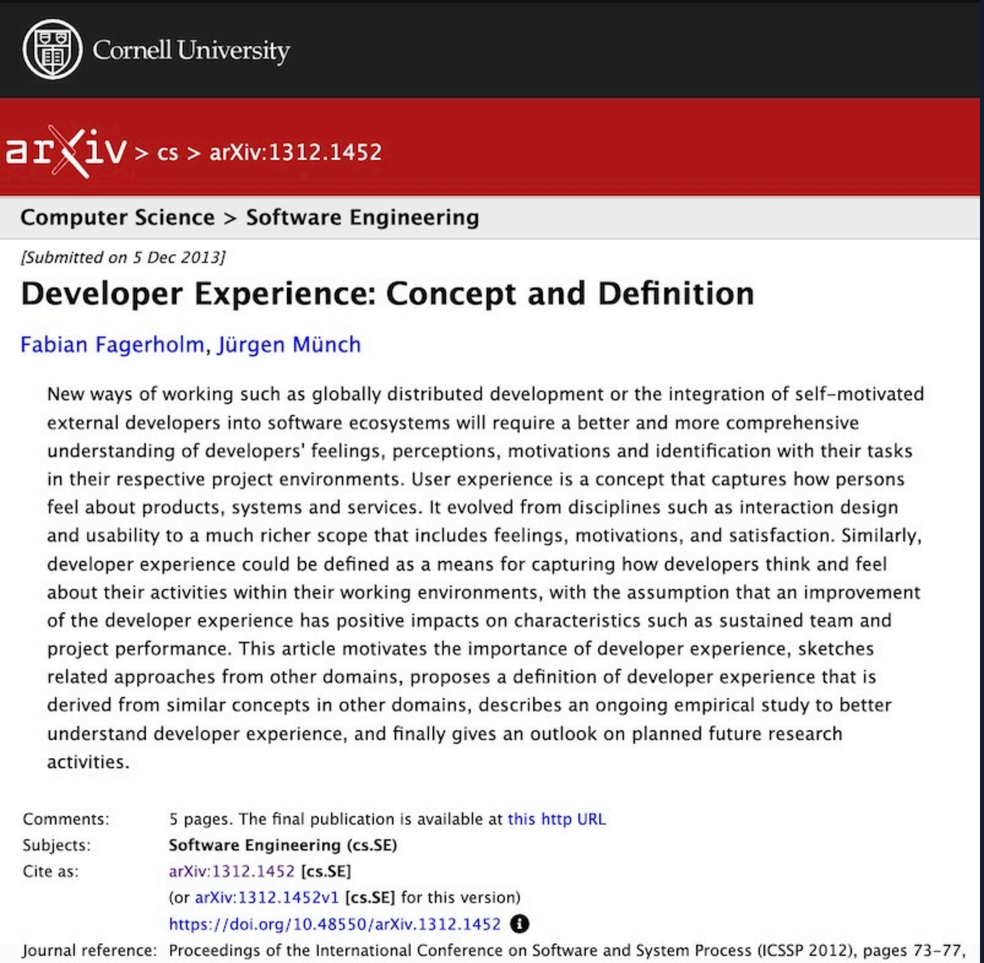
DevEx isn't new

REF: F. Fagerholm and J. Münch, "Developer experience: Concept and definition," 2012 International Conference on Software and System Process (ICSSP), Zurich, Switzerland, 2012.

DevEx isn't new



Cornell University

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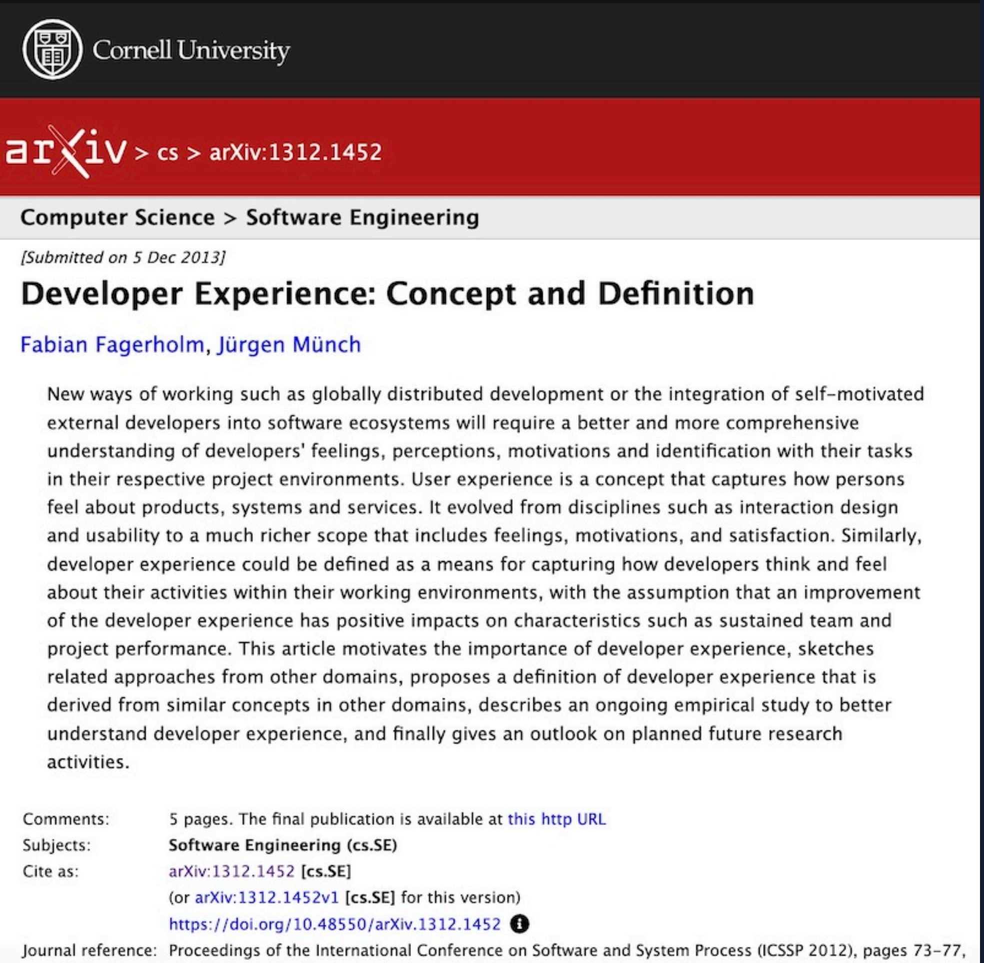

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DevEx isn't new

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Point of clarification

- "DevEx" by default focuses on "developer"
- View "DevEx" as a whole of the lifecycle

CI/CD

- Standardization
- Interoperability

CI/CD Standardization

- consistency to development pipelines
- reduces friction
- enhances collaboration

Implementing CI/CD Standardization

Assessment and Analysis

- Thoroughly assess your current CI/CD pipelines
- Identify pain points and bottlenecks
- Analyze specific requirements and constraints

Implementing CI/CD Standardization

Define Standardization Goals

- Define goals and objectives, align with strategy and objectives
- Determine success, like reduced deployment times / error rates

Implementing CI/CD Standardization

Select Tools and Practices

- Choose tools & practices aligned with organization needs, goals
- Establish standard templates and configurations for pipelines
- Enforce coding standards for consistency and readability

Implementing CI/CD Standardization

Utilize Version Control

- Store pipeline configs as code in version control systems
- Implement branching and pull request strategies

Implementing CI/CD Standardization

Automated Testing and Validation

- Integrate automated testing and validation into templates
- Implement code reviews and peer validation early in dev process

Implementing CI/CD Standardization

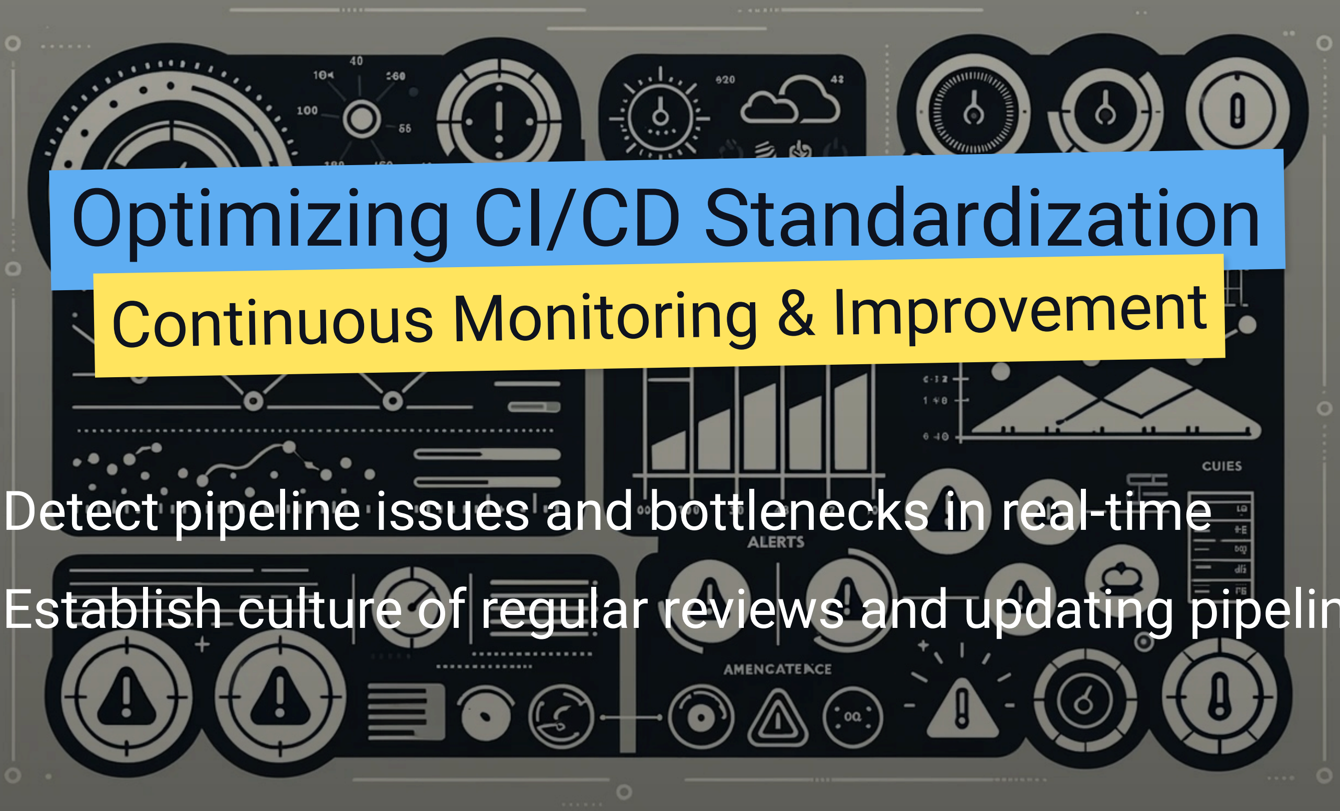
Documentation and Training

- Create comprehensive docs for processes, configs, best practices
- Provide training to ensure understanding and effective use

Optimizing CI/CD Standardization

Optimizing CI/CD Standardization

Continuous Monitoring & Improvement

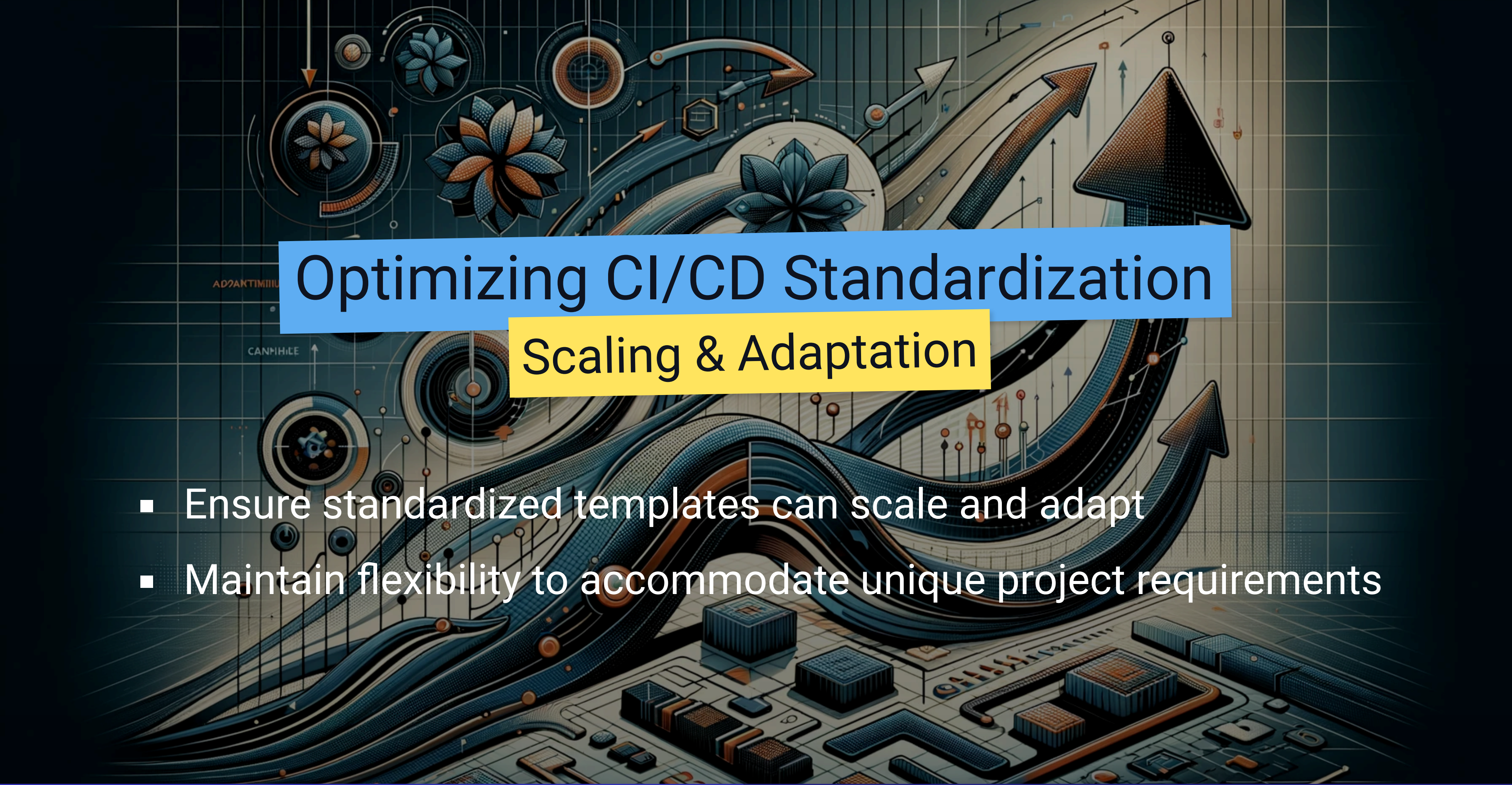


- Detect pipeline issues and bottlenecks in real-time
- Establish culture of regular reviews and updating pipelines

Optimizing CI/CD Standardization

Governance & Compliance

- Implement governance policies to enforce pipeline standards
- Validate compliance with industry regulations / internal standards
- Regularly audit and assess adherence to standardized practices



Optimizing CI/CD Standardization

Scaling & Adaptation

- Ensure standardized templates can scale and adapt
- Maintain flexibility to accommodate unique project requirements

Optimizing CI/CD Standardization

Feedback Loop & Collaboration

- Foster collaborative environments where feedback & contributions encouraged
- Continuously communicate benefits of standardized pipelines & celebrate successes

PIPELINE
CI/CD PIPELINE
TESTINO
DEPLOYATIEN
MOPTOYATIEN
TESTING
DEPLOYING
MEPLOYATION
MEPLOLYATIEND
OPTIMIATION

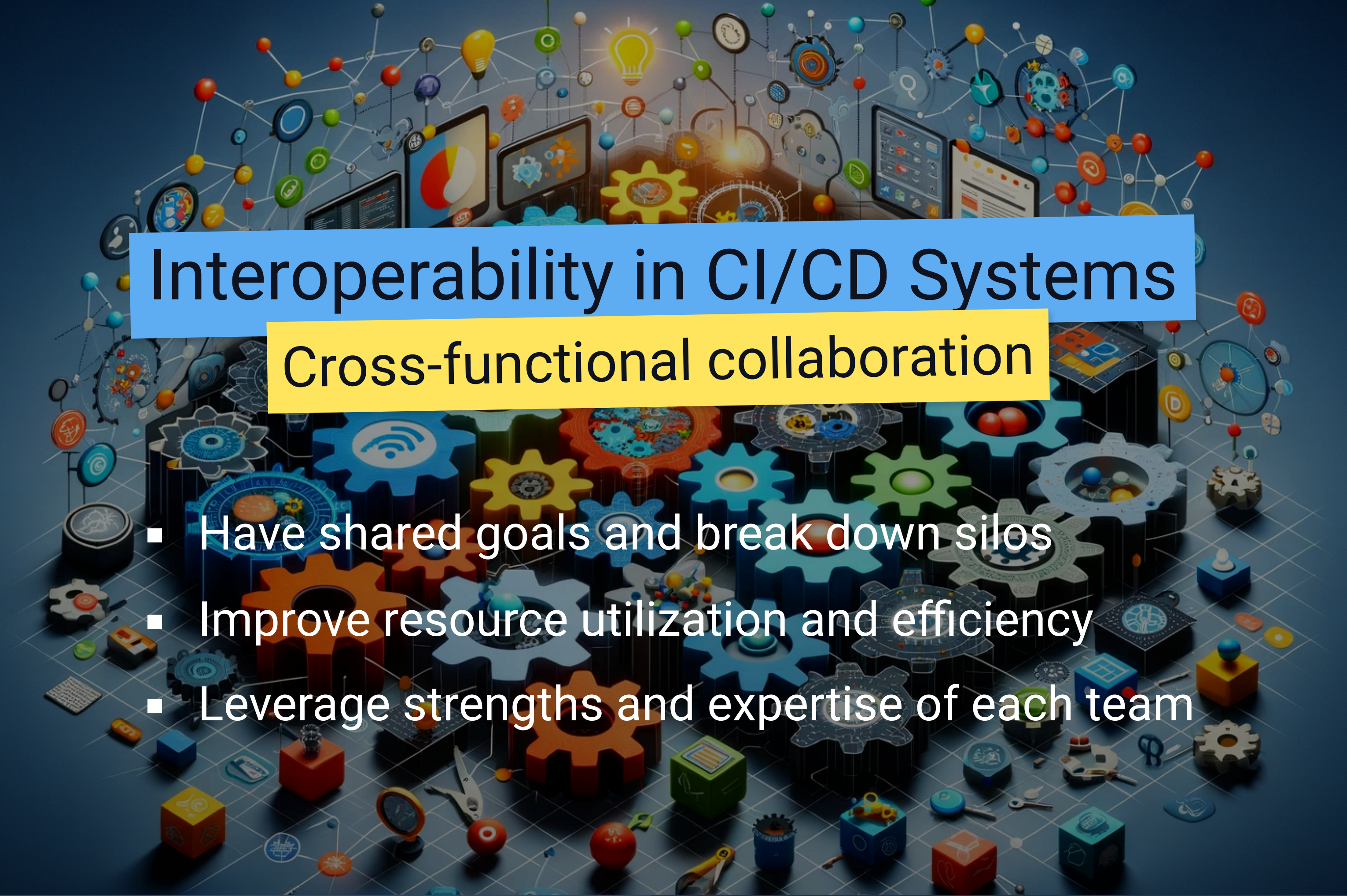
CI/CD Interoperability

- seamless integration across diverse toolsets
- fosters flexibility in development environments

Interoperability in CI/CD Systems

Streamlined workflows

- Reduce manual intervention, increase automation with templates + reusable config
- Eliminate waste and improve efficiency
- Deliver faster with higher quality + better developer experience



Interoperability in CI/CD Systems

Cross-functional collaboration

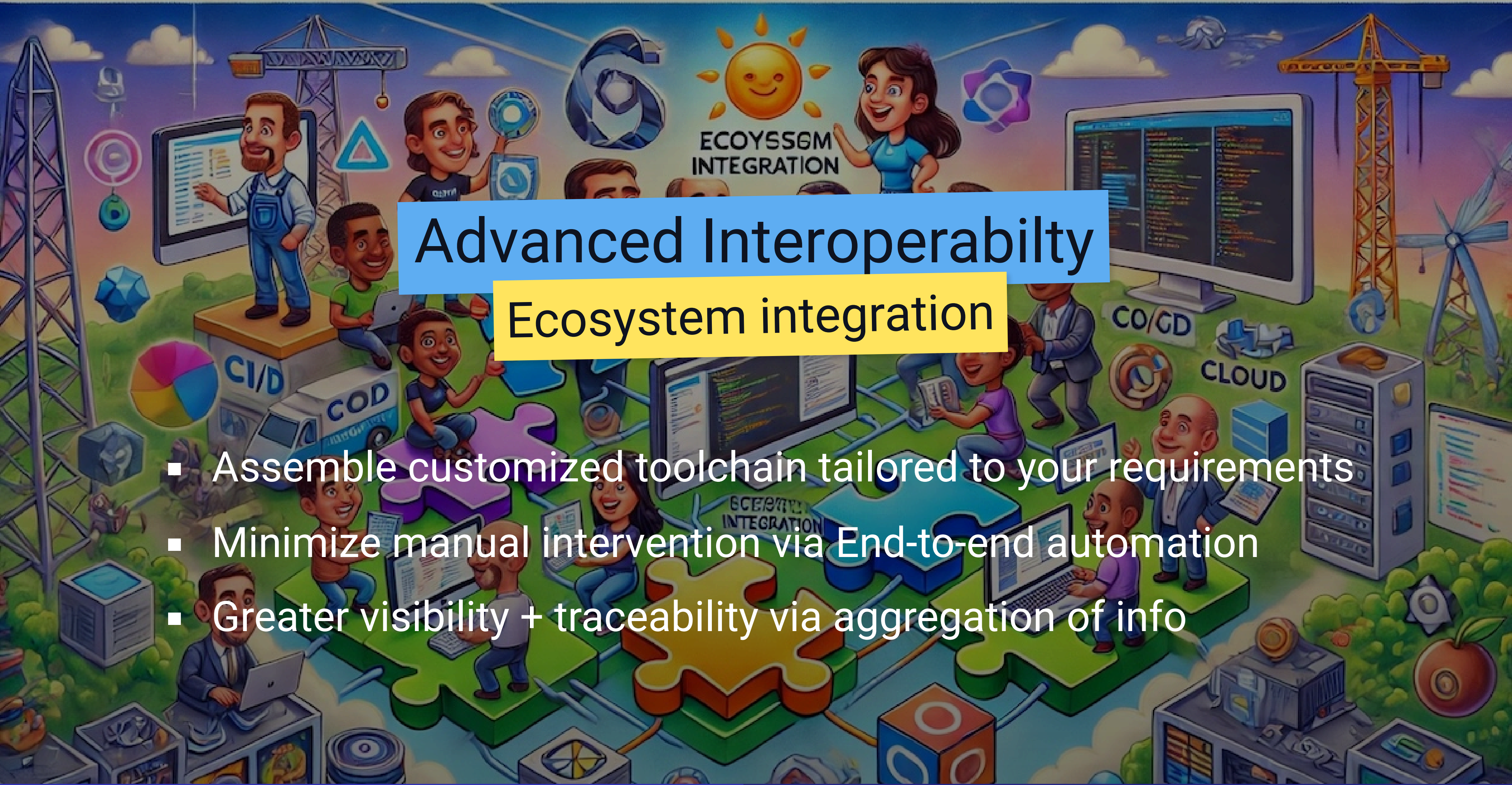
- Have shared goals and break down silos
- Improve resource utilization and efficiency
- Leverage strengths and expertise of each team

Interoperability in CI/CD Systems

Flexibility and adaptability

- Respond quickly to rapid change by adjusting workflows, add new tools, adopt new practices
- Experiment and innovate quickly by leveraging new tools and technologies
- Increase efficiency by leveraging existing resources and tools

Advanced Mode
INTEROPERABITY



Advanced Interoperabilty

Ecosystem integration

- Assemble customized toolchain tailored to your requirements
- Minimize manual intervention via End-to-end automation
- Greater visibility + traceability via aggregation of info

Advanced Interoperabilty

Ecosystem integration

Role of community and Open Source

- Address potential interoperabilty challenges (case studies, submitting fixes)
- Create external community around your tools, gathering feedback directly

Advanced Interoperabilty

Troubleshooting and debugging

- Identify and resolve issues early
- Proactive problem solving with data and automation
- Faster resolution and improved reliability

Advanced Interoperabilty

Cross-platform deployment

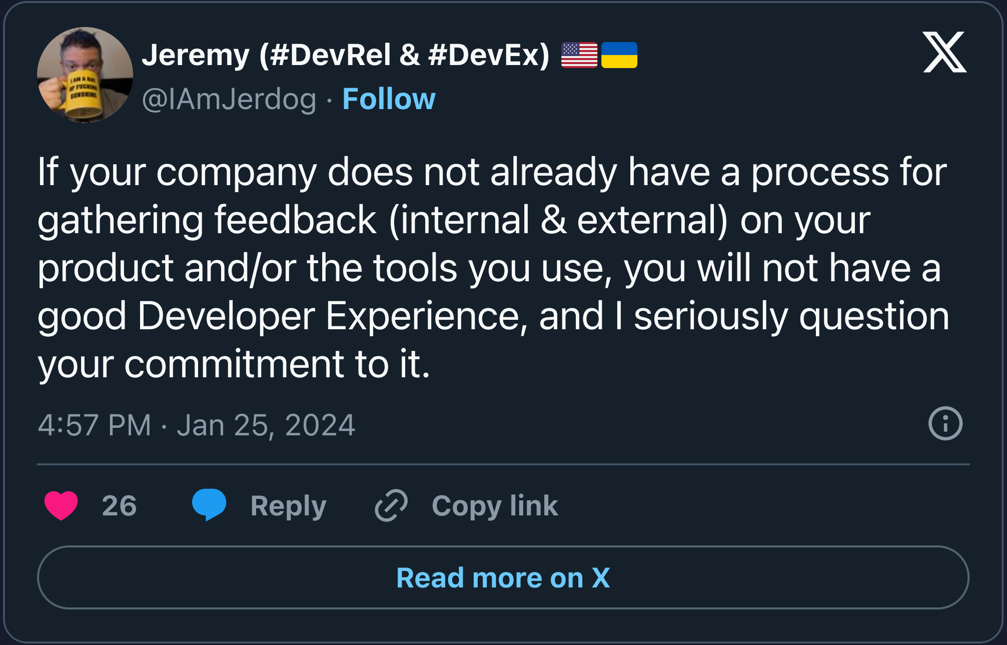
- Provide uniform approach for diverse platforms
- Reduced complexity and increased efficiency
- Broader reach and greater impact

CI/CD Interoperability Challenges…

…and Remedies

Challenges	Remedy
Diverse Toolsets & Ecosystems	*Prioritize critical dependendencies, objectives*
Data formats and schema differences	*Implement unified data formats*
Authentication and Authorization	*Standardize methods, integrate governance*
Versioning and compatibility testing	*Clear versioning policies, regular compatibility testing*
Lack of documentation	*Prioritize efforts + allocate resources, implement standards + process*

DevEx reflects an organization’s values



Jeremy (#DevRel & #DevEx) 🇺🇸🇺🇦

@IAmJerdog · **Follow**

If your company does not already have a process for gathering feedback (internal & external) on your product and/or the tools you use, you will not have a good Developer Experience, and I seriously question your commitment to it.

4:57 PM · Jan 25, 2024

DevEx is...

> ...ruthlessly eliminating the barriers (and blockers) that keep your developers (and practitioners) from being successful

-Me

Thank You.

/in/jeremymeiss

@IAmJerdog

DEV @jerdog

@jerdog@hachyderm.io

END