![ITEA3 logo]

Project Profile

VISDOM

Visualising all angles of software development

Visualisation is a powerful tool which is being underutilised in the DevOps approach to software development. By aggregating data from multiple sources and creating dashboards that can be tailored to all stakeholders, the ITEA project VISDOM promises to deliver a major change in how software is created.

ADDRESSING THE CHALLENGE

Communication problems between developers, operations and stakeholders play a key role in project delays and failures, as does poor visibility of dependencies. Additionally, DevOps projects utilise Continuous Deployment, a constant pipeline of code to production without manual interventions. Multiple tools are used for development tasks, only some of which are compatible through shared interfaces. This means that the collected data can usually only be visualised within the scope of one tool. A new approach to visualisation is needed to address both of these issues.

VISDOM dashboard
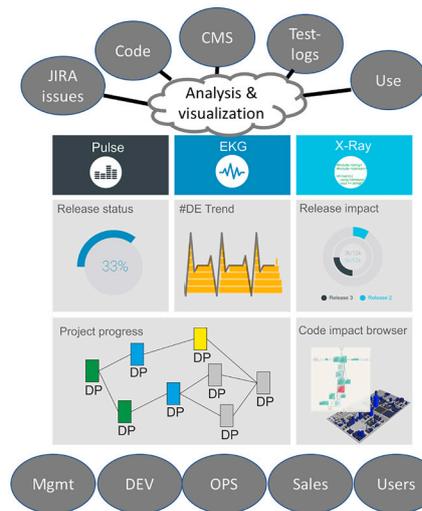
PROPOSED SOLUTIONS

The VISDOM (Visual diagnosis for DevOps software development) project proposes a radical shift: instead of creating specialised visualisation tools, data from available tools must be aggregated in an interoperable manner. This gives developers the freedom to choose tools that work best for them. A data framework will be defined with a pluggable architecture for data collectors, unified data models and software engineering-specific analytics; this will enable the fast creation of new dashboards and the visualisation of software architecture, dependencies, source code and run-time behaviour. Unlike current technologies, these dashboards will be configurable to different stakeholder viewpoints. Through the clear and early

indication of problems, quicker solutions can be found. VISDOM will also define and develop DevOps-specific analytics components and metrics to allow deeper analysis of the visualised data.

PROJECTED RESULTS AND IMPACT

VISDOM's results will be piloted by the consortium, after which they will be exploited in both the internal dashboards and products of software companies. Those that adopt these innovations will benefit from improved efficiency and traceability in the software process and increased stakeholder involvement, allowing them to boost their revenues by over 15%. Crucially, this arrives at a time when DevOps is becoming

the development norm: 80% of large enterprises and 71% of SMEs are currently adopting it[1]. By providing the first support for a DevOps visualisation paradigm, VISDOM will allow companies to remain competitive in this rapidly-expanding environment. It will also enable smaller companies to enter into the software analytics and visualisation markets (worth USD 26.78 billion in 2020[2]), thus cementing DevOps as the future of software development.

[1] https://www.suse.com/media/report/rightscale_state_of_the_cloud_report.pdf
[2] https://www.marketsandmarkets.com/Market-Reports/businessintelligence-analytics-software-market-247431917.html

VISDOM

ITEA3

The Netherlands

Canon

TIOBE
the software quality company

university of groningen

Spain

Experis
ManpowerGroup

UPC

Finland

invenco

Qentinel

SOFTAGRAM
VISUALIZE YOUR SOFTWARE

Tampere University

UNIVERSITY OF OULU

VINCIT

Romania

Beia
CONSULT INTERNATIONAL

SIS

Turkey

BitNet
BitNet Bilişim Hizmetleri Ltd. Şti.

ENFORMA

t·mob
THINKS MOBILITY

TURKCELL
TEKNOLOJİ

Project start
October 2018

Project end
June 2022

Project leader
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