

# Developer Analytics

Providing insights to effectively manage performance.

# Understanding BlueOptima's Developer Analytics

BlueOptima's Developer Analytics (DA) is a market-leading software development analytics platform. Enabling IT and software leaders to align with strategic goals through actionable insights as well as improving developer productivity and code maintainability. Developer Analytics empowers objective decision-making across an entire software development estate.

Analysing up to 36 static source code metrics, Developer Analytics generates a single objective productivity metric that is language-agnostic, and truly reflects the level of meaningful change made to source code.

By utilising this metric to pinpoint opportunities for growth or efficiencies across different teams or projects, IT leaders can be confident in their decision. Not only can strategic choices be made with more precision but their effectiveness can be analysed for a businesses future.

One component of Developer Analytics, the 'Team Lead Dashboard' (TLD), provides team leads with insights to effectively manage performance. This includes supporting an increase in an individual's productivity as well as the quality of their coding outputs into the estate.

## BlueOptima's Metrics

**Actual Coding Effort (ACE) and Billable Coding Effort (BCE)** are two data-points based on 36 metrics combined with three dimensions of code changes (volume, complexity and interrelatedness). This creates a representation of a developers output in terms of their intellectual effort delivered within their code changes. Read more about these metrics [here](#).

**Analysis of Relative Thresholds (ART)** metric is designed to help organisations improve and maintain a high quality of code. It is expressed as the proportion of Coding Effort that makes source code less maintainable, or 'aberrant'. [Here](#) is a deeper dive maintainability.

# Benefits and Value

Developer Analytics for IT and software leaders:

- Developer Analytics creates **transparency across the intellectual effort** used to create a code change and the quality of the code.
- Developer Analytics enables **objective metrics** to be adopted across an organisation, supporting companies to align strategic goals on all levels of an organisation's hierarchy.
- BlueOptima's proprietary Coding Effort (CE) and Analysis of Relative Thresholds (ART) are two key metrics within Developer Analytics that are designed to enable **enhanced efficiency** and effectiveness across software teams.
- Developer Analytics is designed to **integrate seamlessly** into the software development process; thus it runs automatically and doesn't require any manual actions from developers or managers to scan for new coding changes.
- Developer Analytics provides a **unified and comprehensive view** of the software development productivity across a company's codebase with language-agnostic metrics.
- Developer Analytics provides a basis for **data-driven decisions** by executive and IT leaders. To assure the accuracy of metrics, BlueOptima's

proprietary benchmarking algorithm is powered by the analysis of almost 9 billion code revisions while the model itself has been proven with more than 10 years of continuous research and development.

- Developer Analytics scans for code changes on a daily basis so our customers can **identify the red flags during the early stage of a project**. Meaning you are able to manage your software investments and mitigate the risk of experimentation of software management and development.
- To provide heightened value and solution-driven approach to BlueOptima's metrics, the 'Maintainability Report' page within the platform, includes **actionable recommendations** for the causes of issues with code quality and possible resolutions.

Aspects of the platform's Team Lead Dashboard:



## Sprint Retrospective:

With BlueOptima's unique source code analytics powering the task data, team leads can filter the data by sprint levels. Providing full visibility of a team's productivity and code quality metrics as well as their sprint velocity and accuracy.



## Task Type Distribution:

Enabling team leads to identify the amount of Coding Effort (CE) invested in each task type. Incrementally and iteratively, they are able to improve resource planning and task allocation for future sprints.



## Pull Request Analysis:

Giving visibility across the pull request process, team leads are supported in increasing the velocity of their team without risking code quality.



## Maintainability Insights:

Driving higher quality code, team leads are able to identify the influences determining their estate's maintainability score. Therefore understanding the necessary actions required to resolve and increase the quality of their coding outputs.



## Visibility into Team Performance:

The Team Lead Dashboard provides team leaders with granular visibility into the performance of their teams at a sprint-level.

# Where to use Developer Analytics?

## Use Cases

Software and technology are key differentiators for organisations when delivering value to customers and stakeholders. According to the book, 'Accelerate' "Software delivery is an exercise of continuous improvement, and high performers are working incessantly to get better at what they do."

- To conquer the market, you need to deliver reliable software faster than others. This requires a constant revision of internal process and software development practices. Developer Analytics gives IT leaders insights into the productivity of their software teams so that their actions are

informed and swift when issues occur. This allows teams to maintain high levels of efficiency without jeopardising agility.

- A fantastic strategy to increase the efficiency and productivity of your software value delivery is to base your organisation's success on metrics. Your team can produce noticeably better business results by tracking performance along a variety of aspects and continually improving. Developer Analytics will help you accelerate your transformation to a high performing technology organisation.
- Data-driven resource management is one of the key elements to successful and timely project

delivery. Developer Analytics provides a comprehensive and accurate overview of a software team's cross-organization resource distribution. Helping software managers to understand performance declines and identifying the underlying cause, possibly an incorrect resource allocation, as well as the potential solution.

- Many companies struggle to establish strong, reliable relationships with their vendors and furthermore, understanding the contribution being made to their company's estate. Developer Analytics provides essential transparency on a vendors' performance, allowing team

## ... a little more

leads to establish the relationship required by their teams. From years of supporting many companies across the world, BlueOptima has developed a deep insight into understanding vendor performance. As a result, Developer Analytics can support securing your company's outsourced investment for the future.

- Companies are required to remain agile but many struggle to do so. The Team Lead Dashboard component of Developer Analytics, aligns teams and projects with a company's agile practices by using data to understand the drivers behind the productivity of tools, projects, process and people to support
- informed and validated decisions.
- Without clear visibility across a team's capacity, future planning can be unreliable. The Team Lead Dashboard 'Sprint Retrospective', objectively measures a team's efforts for each sprint to understand a team's capacity for future planning and resource allocation.
- Inconsistent 'Pull Request' processes can heavily impact the delivery of code quality. The Team Lead Dashboard 'Pull Request Analysis' provides visibility across the pull request process. Team leads can increase the velocity of their team without risking code quality.

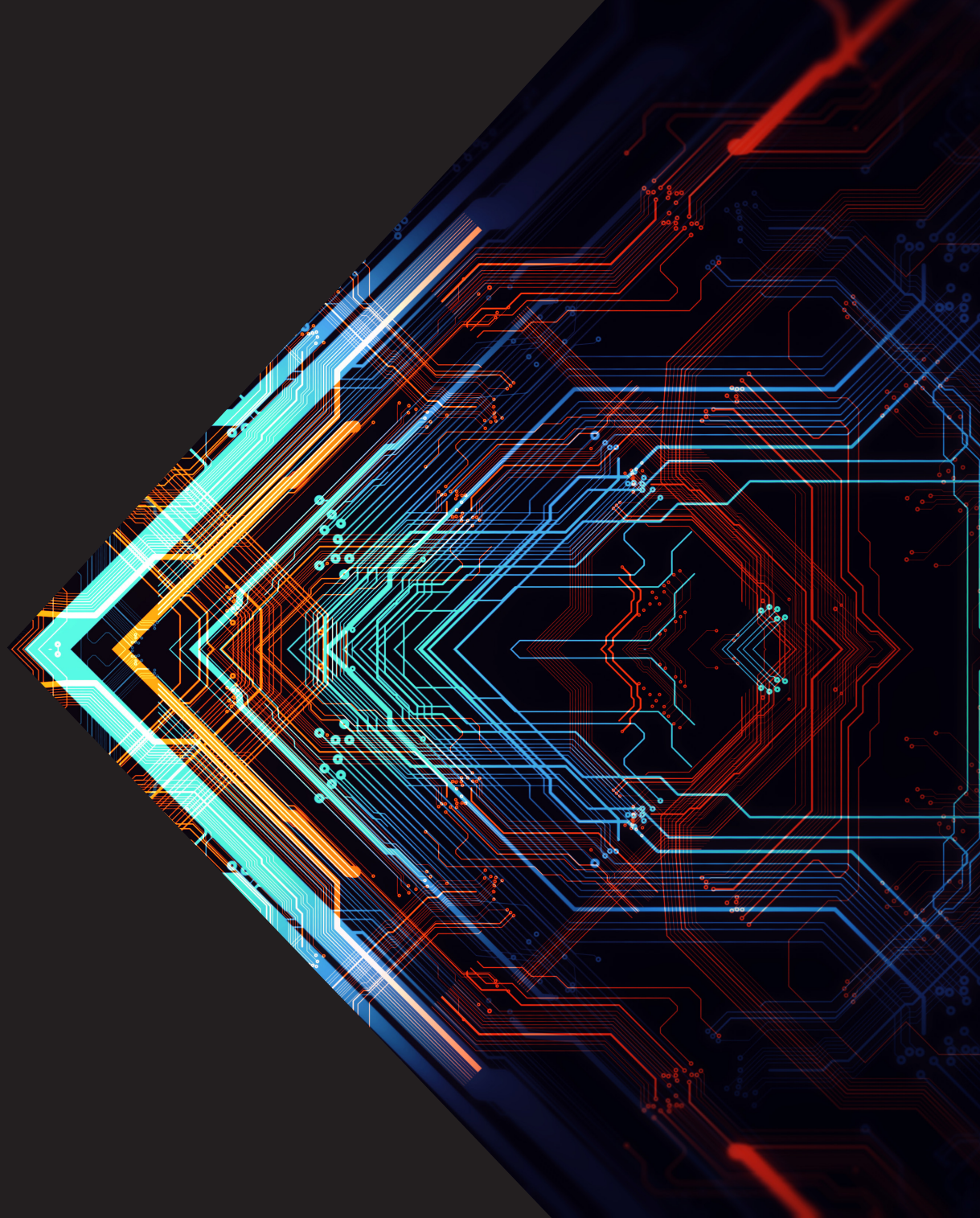
### Who are BlueOptima?

We provide a SaaS technology that objectively measures software development efficiency. Our core metrics for productivity and code maintainability allow executives to make data driven decisions related to talent optimization, vendor management, location strategy and much more.

### Contact Us

To discover powerful insights and determine areas of improvement specific to your organisation, reach out to our team and explore our custom analytics solutions at:

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