



The CAMS Model

CAMS is the top model for DevOps (Culture, Automation, Measurement, and Sharing). Measurement is the activity of interest for us. It is structured in 2 types of measures: inputs and outcomes

While DevOps is interested in 'input' to 'outcome', COSMIC is interested in 'input' to 'output'. But 'output' is a considered part of the 'outcome' of the DevOps process.

The DevOps Process	Metrics in DevOps
<p>Stages succession</p> <p>Plan Business values and requirements are 'defined' and 'planned' in terms of outcome and resulting product. All IT personnel is involved</p> <p>Create This is the stage of the Software Development Process for configuring, coding, and building the product.</p> <p>Verify Candidate releases are quality ensured through code quality, to acceptance testing through a number of appropriate testing sessions.</p> <p>Packaging The product is made ready for deployment through the stage of preproduction where all activities of approvals and configuration are finalised then triggered for Release.</p> <p>Release This is the activity of provisioning and deploying the software into production in its target environment.</p> <p>Configure Deployed software may require some complementary review of the IT infrastructure to be addressed in Operation.</p> <p>Monitor IT organisation identifies issues in the particular release that impacts the end users. This may result in request for changes reaching the Plan stage of activities.</p>	<p>The input measures</p> <p>Technical :-</p> <ul style="list-style-type: none"> • Version control; • Test automation; • Deployment automation; • Trunk-based development. <p>Process:-</p> <ul style="list-style-type: none"> • Work-in-progress limits; • Visual management; • Visualization of the value stream. <p>Culture:-</p> <ul style="list-style-type: none"> • Team culture following the Westrum typology; • Learning culture, and; • Job satisfaction. <p>The outcome measure:</p> <p>Organizational performance:</p> <ul style="list-style-type: none"> • Profitability; • Productivity, and; • Market share. <p>IT performance consists of four measures:</p> <ul style="list-style-type: none"> • Deployment frequency; • Lead time for changes (code commit to code deploy); • Mean time to restore (MTTR), and; • Change failure rate.

Metrics in COSMIC

COSMIC Tool: COSMIC-Method-v4.0.2-Measurement-Manual.pdf

The **input** measures: Requirements, Specification, Design

The **output** measure: Functional size of the product output by the process

Position of the Debate

Where DevOps metrics are often experiential and/or observational, COSMIC offers a rule based quantified metrics focusing on the software product, which is still the end purpose of DevOps.

COSMIC can make its entry in DevOps by substitution, complementarity, or association with DevOps metrics.