The Quality Imperative:
SAS Institute's Commitment to Quality

A corporate statement of SAS' commitment to product quality, service quality, and customer satisfaction

Research and Development at SAS®
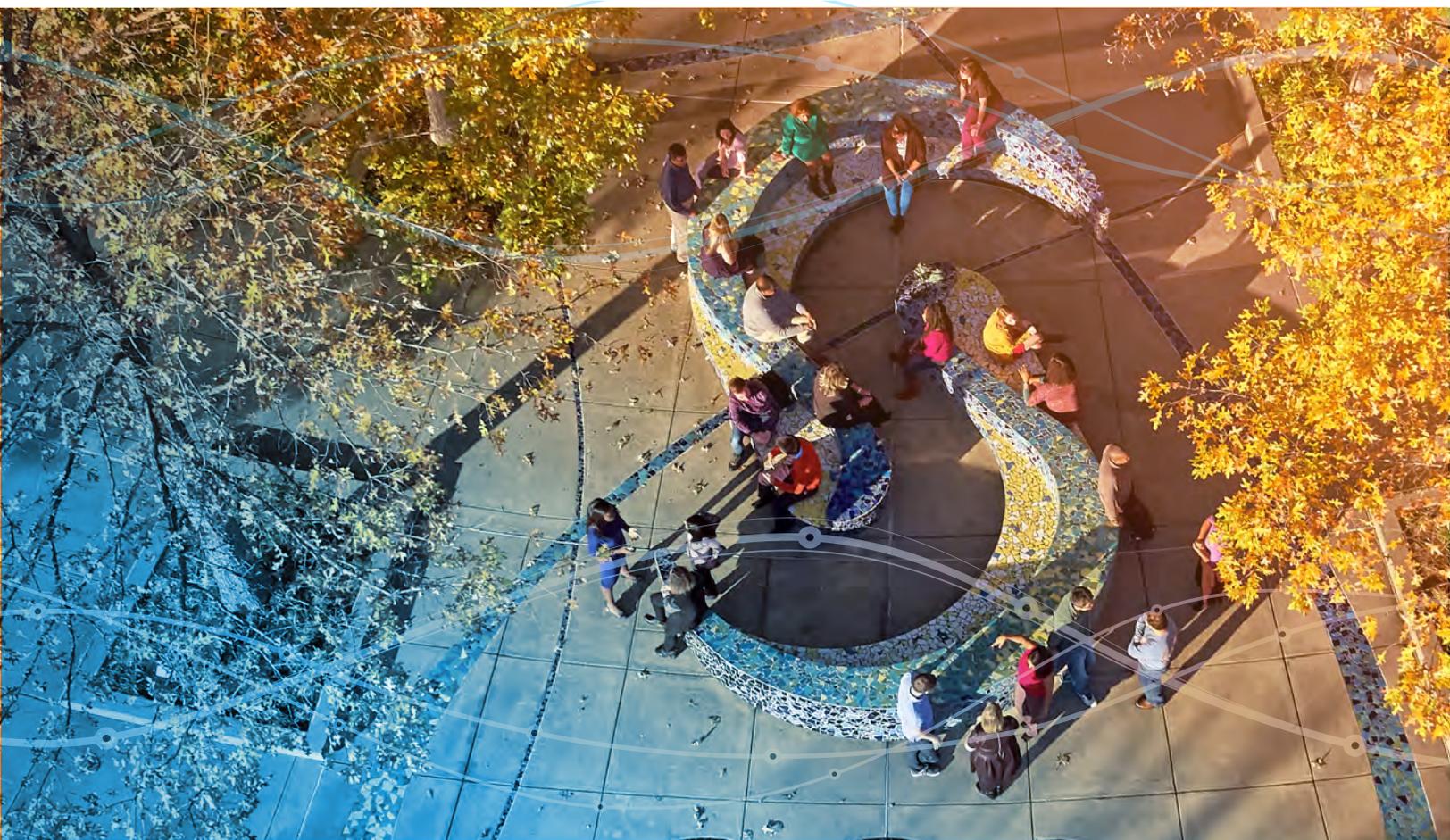
Research and Development at SAS®

The Research and Development Division of SAS drives software research, development, and production. This section provides an overview of information sources used for SAS R&D research and the steps in the development process. Subsequent sections provide details on each step in the software development life cycle. The SAS software development life cycle continuously evolves as R&D embraces proven industry best practices and improvements. This section reflects the software development life cycle currently in operation at SAS.

Because of customer needs, industry requirements, and technology differences, JMP has specific refinements and differences in the processes and tools that they use, as described in JMP: A Commitment to Quality (**http://www.jmp.com/qualitystatement**).

Research

The SAS software development process begins with gathering ideas for a potential new product, function, or enhancement. Ideas for new or enhanced functionality and architecture are collected from information sources such as the following:

- Customer Advisory Board, councils, and focus groups
- Feedback from consultants, development partners, early adopters, and customers
- Analyst research
- Market research
- Professional conferences and communities
- The SASware Ballot (**https://communities.sas.com/t5/SASware-Ballot-Ideas/idb-p/sas_ideas**)
- Technical Support (**sas.com/support**)
- Feedback from SAS Education Division courses
- Usability and accessibility studies
- SAS Global Forum, as well as regional, international, and special interest user group meetings

This information is collected in various input documents and made accessible to team members. Teams work together to evaluate emerging technologies and architectures, exploring and experimenting to determine optimal solutions.

Software Development Life Cycle

SAS' software development life cycle involves the phases shown below in Figure 3. Project management, integrating with product management, evaluating for quality and completeness, and improvement occur continuously throughout this cycle. As part of continuous improvement, SAS is actively and rapidly refining software development life cycle methods to align with DevOps principles and Continuous Integration/Continuous Delivery (CI/CD) approaches more closely.
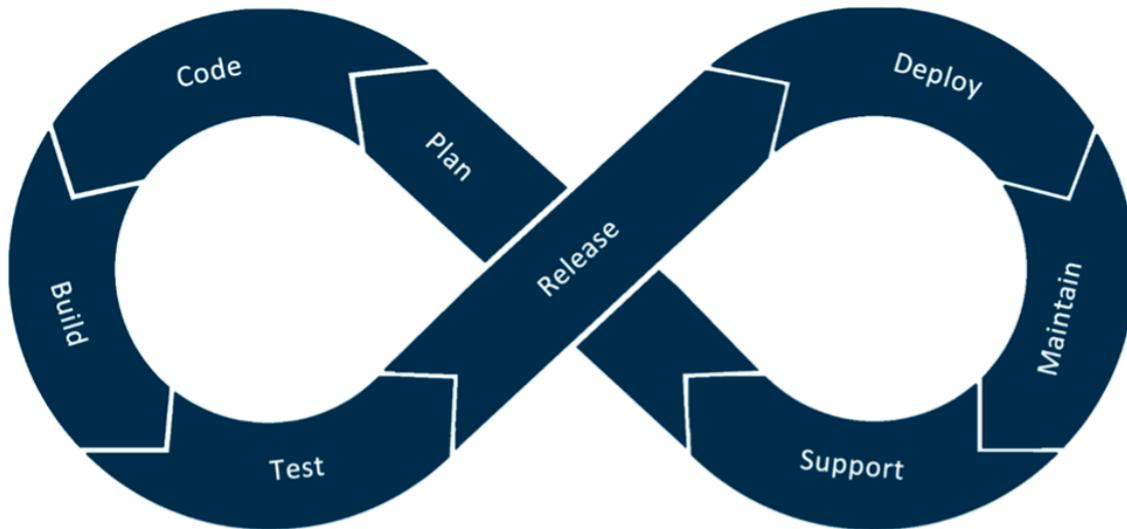

Figure 3: The Software Development Life Cycle.

Subsequent sections describe each phase of the diagram in detail:

- Plan (see the **Planning and Requirements** section)
- Code (see the **Code and Build** section)
- Build (see the **Code and Build** section)
- Test (see the **Testing** section)
- Release (see the **Release** section)
- Deploy (see the **Deployment** section)
- Maintain (see the **Maintenance and Support** section)
- Support (see the **Maintenance and Support** section)

Release Information
The version of this paper is January 2022.

Unless otherwise indicated, this document relates only to SAS 9.4, SAS Viya, and the products that are available with SAS 9.4 and SAS Viya. It also relates to services from the date of this paper forward. Quality processes are continually evolving. Therefore, SAS reserves the right to modify the processes described in this document at any time. If you are using SAS 9.4 and SAS Viya and have questions about processes in those releases, send email to **qualitypaper@sas.com.**

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