



VERSIONING: CONFUSING AND MISUNDERSTOOD... WHAT INDUSTRY REALLY NEEDS

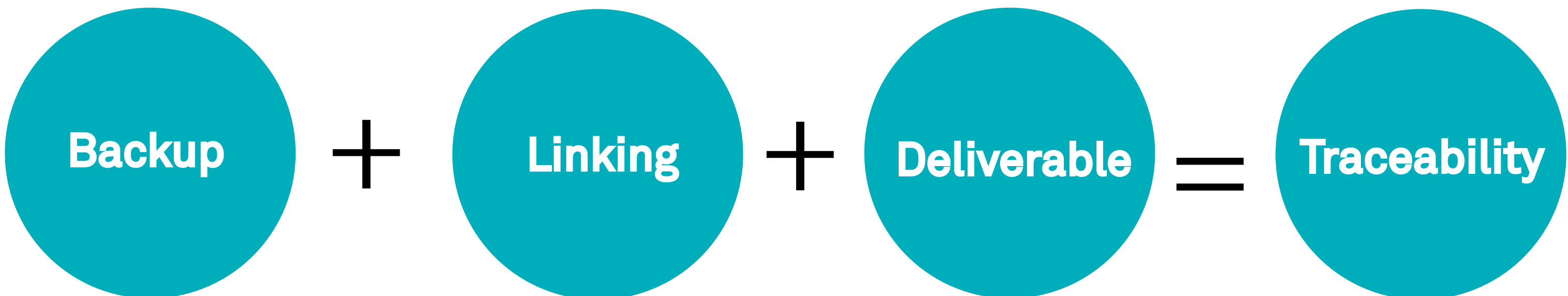
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ABSTRACT

Within the clinical computing lifecycle there are a lot of buzzwords – SCE, auditing, workflow, traceability, and end-to-end. One buzzword that stands out as frequently misunderstood is ‘versioning’. Through many years of helping clients implement solutions, each client seems to have their own flavor of versioning ‘requirements’. However, when you ask them to describe the real business need, they struggle to define it. We believe the concept of versioning boils down to three simple concepts focusing on capturing the clinical deliverables in a way that ensures integrity within your study results. The goal is to focus on the business need and not the technical solution.

WHAT DOES THE BUSINESS REALLY REQUIRE?

Through many years and many SCE implementations, d-wise believes the business needs of ‘versioning’ can be distilled through three key concepts identified below and the combination of these provides the traceability required to ensure the integrity of your study results.



Traceability

Versioning

Source Code

Revision Control

Linking

Source Control

Compliance

Source Code Management

Linking: Understanding the Want

What often gets lost through versioning discussions is the fundamental need to link together inputs, code, and outputs so results can be reproduced with confidence and understand the impact of changes. Previous attempts to solve this required upfront definition of metadata with ongoing manual updates to capture these relationships. In this case, the user wants a dynamic and automatic way to capture this information.

Linking: Meeting the Need

In today’s solutions, there are still many up-front steps required by users to implement these relationships. Technology has made significant progress in the ability to automagically capture relationships between artifacts, and capabilities exist today to capture this key information upon execution without predefining the relationships eliminating manual definition and creating a robust link between your input and your output.

Backup: Understanding the Want

You often hear users say, “What if I delete the file accidentally or mess up my program and can’t go back to a previous ‘version’ of the file?”. Frequently, requirements attempting to describe backup are often confounded with versioning and mask the real business need. In this case, the user wants a safety net in case they make a mistake and need that previous work.

Backup: Meeting the Need

Users do not need fancy source control systems to meet this need. Most basic file storage solutions enable an intuitive mechanism to retrieve file ‘versions’ similar to contemporary solutions (Box, Google, SharePoint. While ‘backup’ plays a role in the larger traceability solution, it must be implemented in a way that that does not create extra burden for the end user.

Deliverable: Understanding the Want

Finally, at the end of the day, you must be able to produce a complete set of information to external stakeholders that is robust, traceable, and can enable clinical decisions. To accomplish this goal, the user wants to create a package of all content, relationships, and context between their data, code, and outputs to robustly prove the study results.

Backup: Meeting the Need

Once an organization has addressed the key concepts above – maintaining revisions of individual files and linking the inputs, code, and outputs –building a package of information becomes the easy part. Leveraging the building blocks of technology processes to capture the information will enable the organization to deliver a package that is complete, auditable, and has the right stuff.