



FROM THE VISION TO THE BIG-BANG IMPLEMENTATION OF ST.26

- The problem to solve:
 - the need to improve search accuracy on life sciences patent field
 - The need to streamline SEQL workflows and improve automation (one SEQL fits all IPO's)
- 2010: the beginning of the journey CWS approves EPO proposal and Task No 44 is created
- 2016: Standard ST.26 is approved by the CWS/4BIS
- 2020: 1st release of WIPO Sequence tool and EPO Strategic Plan (SP2023) at full steam

 Big-bang date set for ST.26 and adaptative mandatory development triggered at EPO
- 1/7/2022: all PCT offices ready to receive sequence listings in ST.26 format
- 2023: WIPO launches survey to access benefits/difficulties by the IPO's on transition to ST.26
- 2024: EPO and USPTO propose 2 substantive changes to improve ST.26



THE IMPLEMENTATION OF ST.26 AT EPO

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■ The challenge:

- Use the new open source IT stack to drive the adaptation development as much as possible
- Changes in the SEQL flow impact almost every IT system in Patent Grant Process and Search
- Re-utilize existing IT components as much as possible
- Streamline the SEQL flow and significantly reduce the manual tasks
- Certified copy of Priority document

■ The objectives

- Solve the original problem improve search accuracy, streamline and automate the SEQL flow
- Improve efficiency on the Patent Grant Process for applications with SEQL's
- compliance with INSDC requirements => more info available to the public and examiners

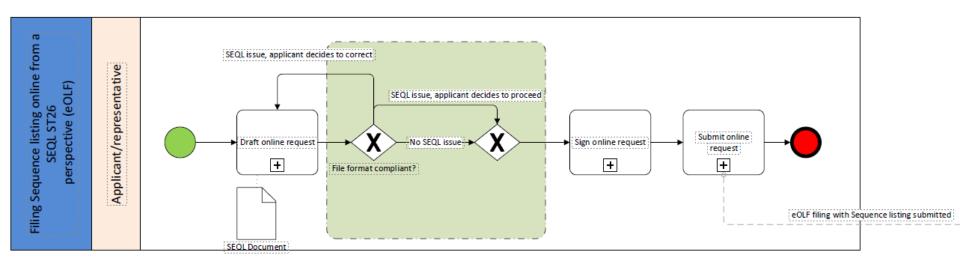


Continuous [Cloud-Native] Delivery Landscape Observability [insights,dashboards, metrics, tracing, logs] Reference Architectures APIS & Event-Driven Frontend Microservices Applications Architecture build tooling Binary Artefact Mgt k8s platform/cluster [maven/java, JS/node, python,golang,..] Container Repo Secrets/Creds Mgt SCM GitHub Actions Bitbucket Req Mgt Compile & Unit-Non-Production Production Deployment Container app logs [TBD] Static Analysis Regression Test Initialisation Package Integration Test Verify & Package Deployment Description apigee alerts Issue Mgt **ŸJIRA** API Mgt Service Mesh tracing IAM kubernetes Wiki Release Automation ChatOps Container-Orchestration 🗱 slack X.Confluence Security and argo Code-QA Compliance SCAmore app- or Logging sonaroube 🗂 agua Storage/DBs platform-specific

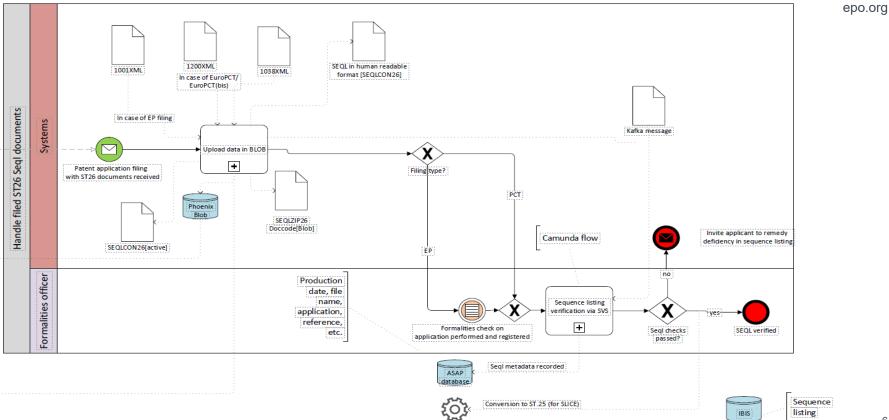
& kafka

SQL Server

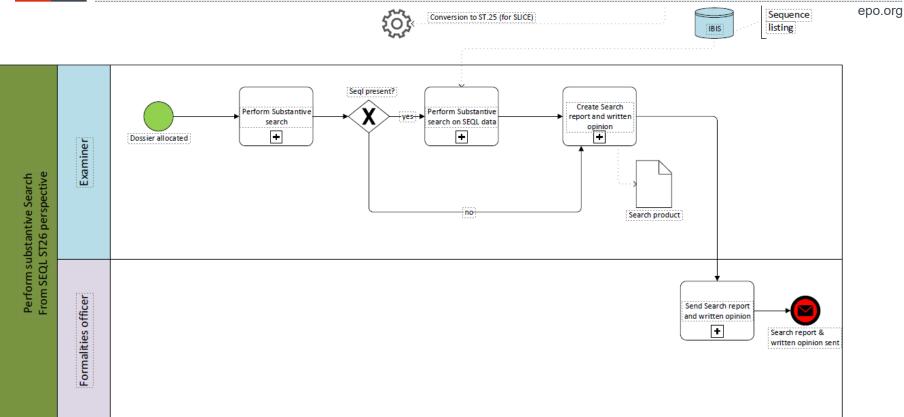
insights...



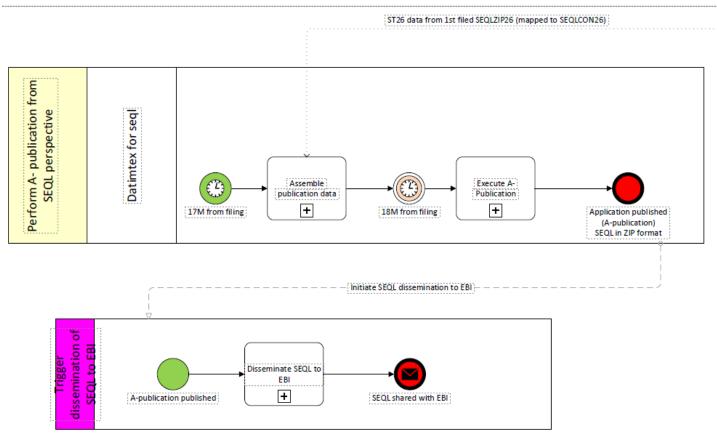






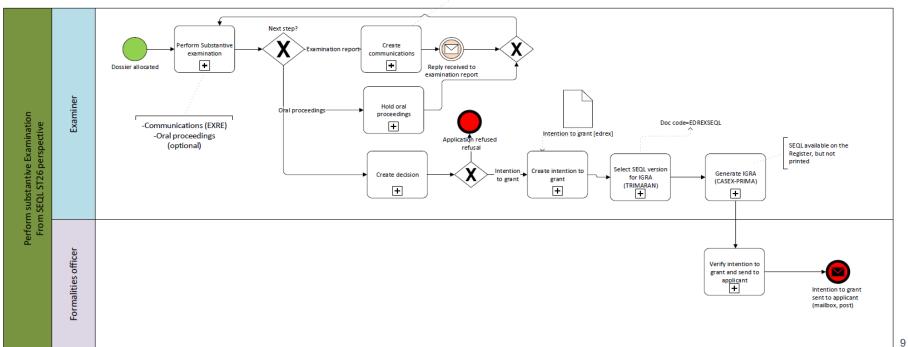


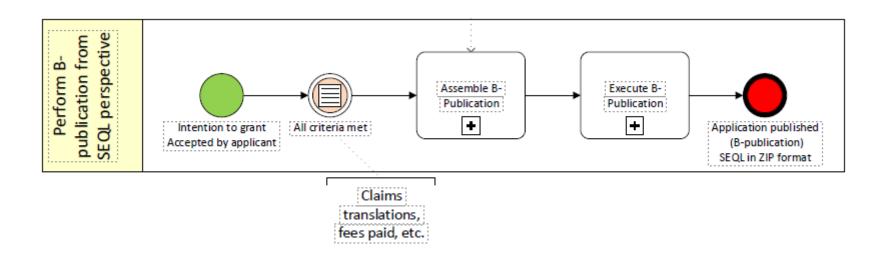






Note: Formalities officer is involved in sending out communications and submissions

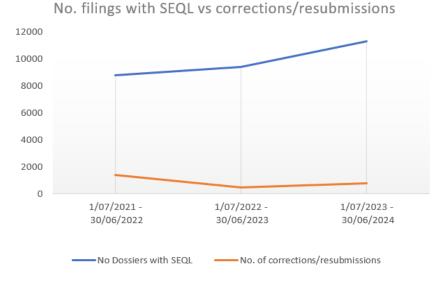




■ 84% of all filed SEQL's were not deficient in the period 1/7/2021 - 30/06/2022

■ 93% of all filed SEQL's were not deficient in the period 1/7/2023 - 30/06/2024

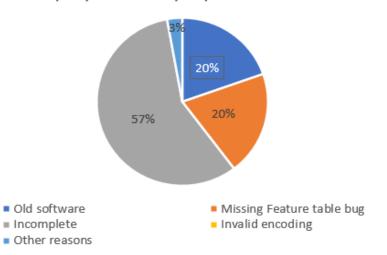
ST.26 clearly brought improvement to the patent grant process



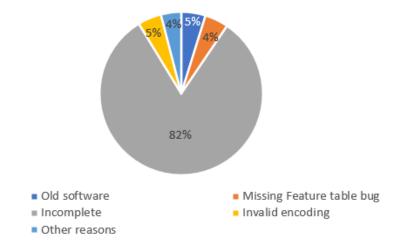
■ Incomplete

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Distribution of the SEQL deficiencies found 1/07/2022 - 30/06/2023



Distribution of the SEQL deficiencies found 1/07/2023 - 30/06/2024



THE ROOM FOR IMPROVEMENT

- The main reason for inviting applicants to resubmit a SEQL is its incompleteness:
 - > There is no automatic way so far to detect whether all disclosed sequences are in the Sequence Listing upfront and some applicants do not have also preventive measures in place
- Another recurrent issue are nucleic acid sequences that are wrongly annotated as proteins (AA)
 - It may be overcome by implementing a warning in WIPO sequence tool
- Applicants are often unaware that some (short, non-specifically defined) sequences have been automatically replaced by skipped codes, leading to a unsolvable issue of loss of disclosure
 - It may be overcome by tolerating short sequences in the sequence listing