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{teal.builder}: Our Journey After One Year

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Freeman Wang, R/Shiny Dev Lead (ART)
Andre Couturier, Global Head (ART)
Analytics and Reporting Tools

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Disclaimer and Disclosures

The views and opinions expressed in this presentation are those of the author(s) and do not necessarily reflect the official policy or position of Sanofi.

Agenda

- Introduction
- Our Achievement
- New Feature Demo
- Conclusion

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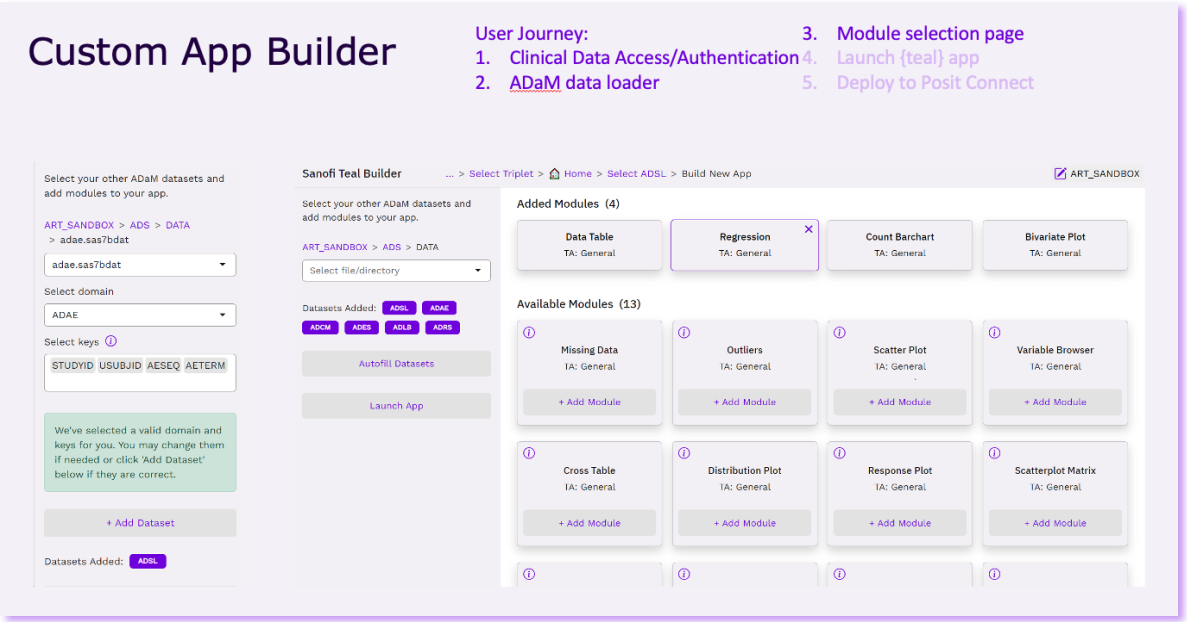
Introduction

{teal.builder}, an advanced self-service platform built on the {teal} ecosystem, empowers both business users and programmers to create and deploy R/Shiny-based {teal} apps. By bridging low-code functionality with expert customization, it enhances scalability for interactive data exploration and reporting automation. This innovative tool has gained great traction at Sanofi for its ability to address the unmet need of efficient clinical data exploration and review.

Our PhUSE US Connect 2024 presentation:



Business Advancements

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STUDY-LEVEL APP

- Customized {teal} apps with study-level specifications, for internal statistical surveillance activities.

SELF-SERVICE

- Non-coder business users can explore clinical data with various exploration modules
- Standardized {teal} code templates

EFFICIENCY

- Swift transformation of ADaM data into {teal} dashboards
- Instant scalability across all studies
- Reusable configuration
- Rapid prototyping and deployment

CENTRALIZATION & STANDARDIZATION

- Standard module centralization
- Possible platform for future module governance
- Facilitate statistical innovation

Technical Progress

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CLINICAL DATA ACCESS

- Authenticated API access to clinical data repositories
- Option to connect with local ADaM files

MODULE CONFIGURATION

- Reuse configuration
- Iterative app re-editing

DATA VALIDATION

- Programmatic checks to verify compatibility between loaded data and selected modules

EXTENSIBLE DEPLOYMENT

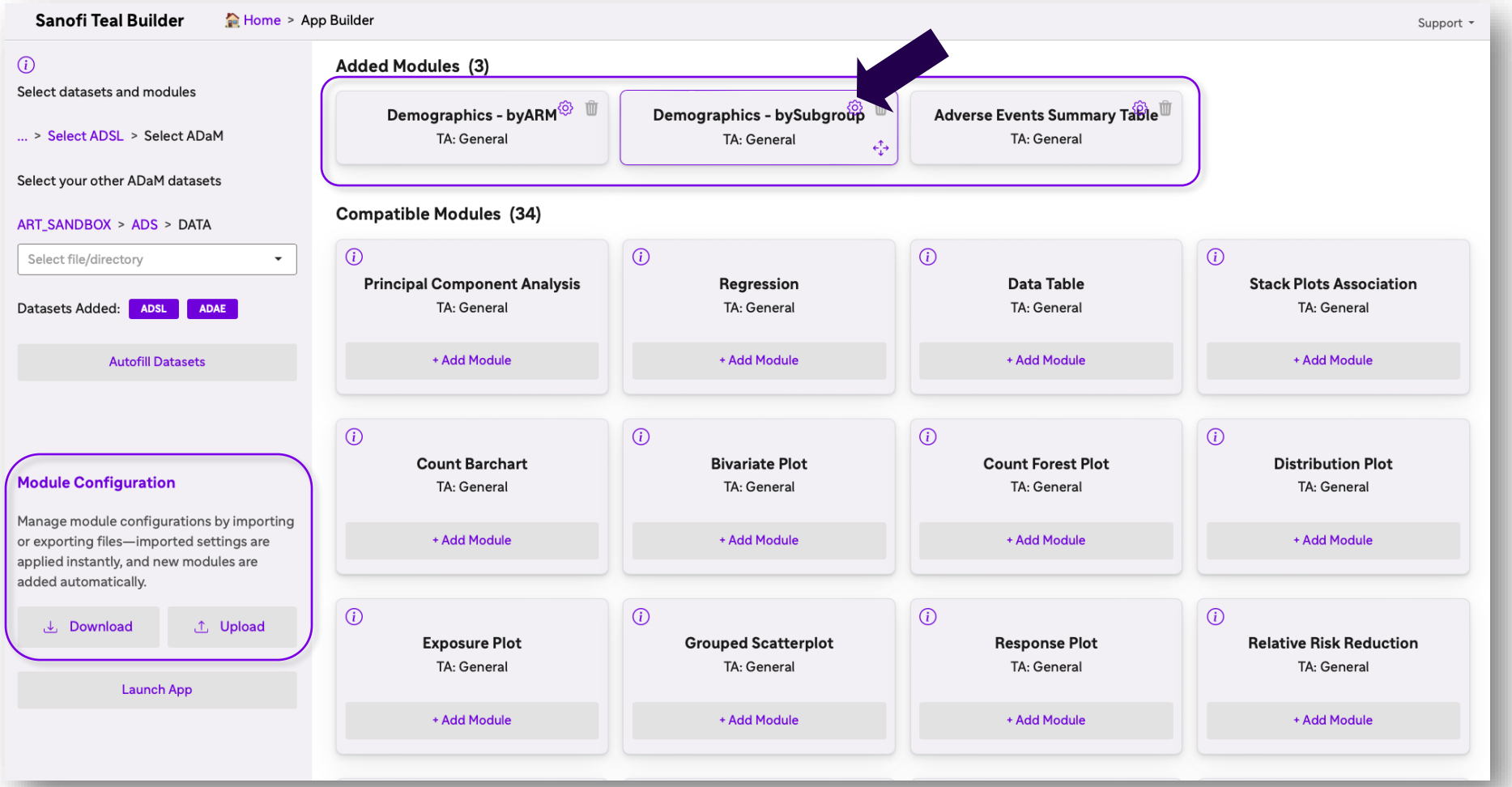
- GitHub's CI/CD pipelines for production-ready deployment
- Featured app review
- Automatic module-vs-data compatibility test report

Demo

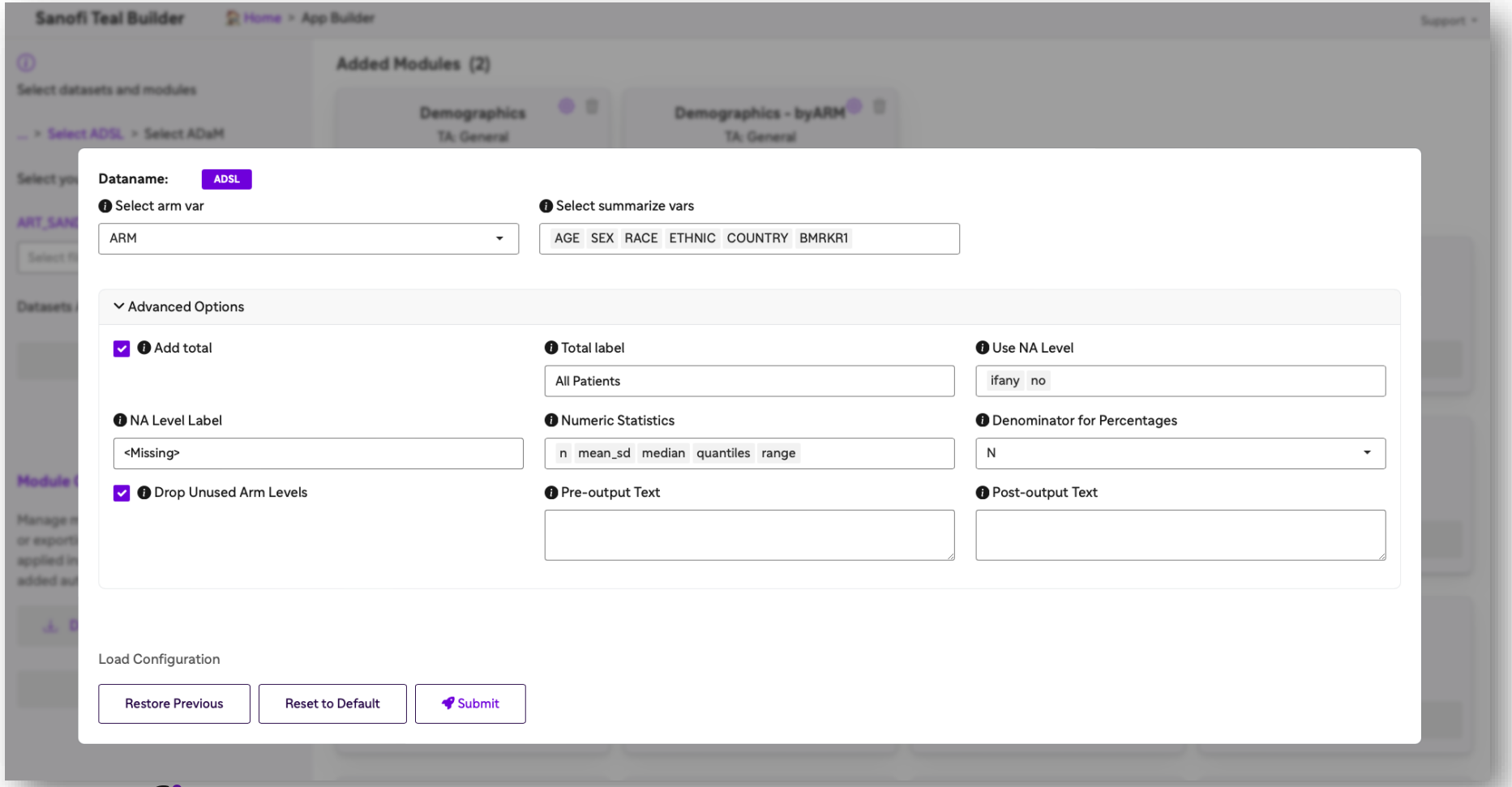
SCREENSHOTS

Disclaimer: All data presented in this presentation are simulated.
No real patient information is used or disclosed.

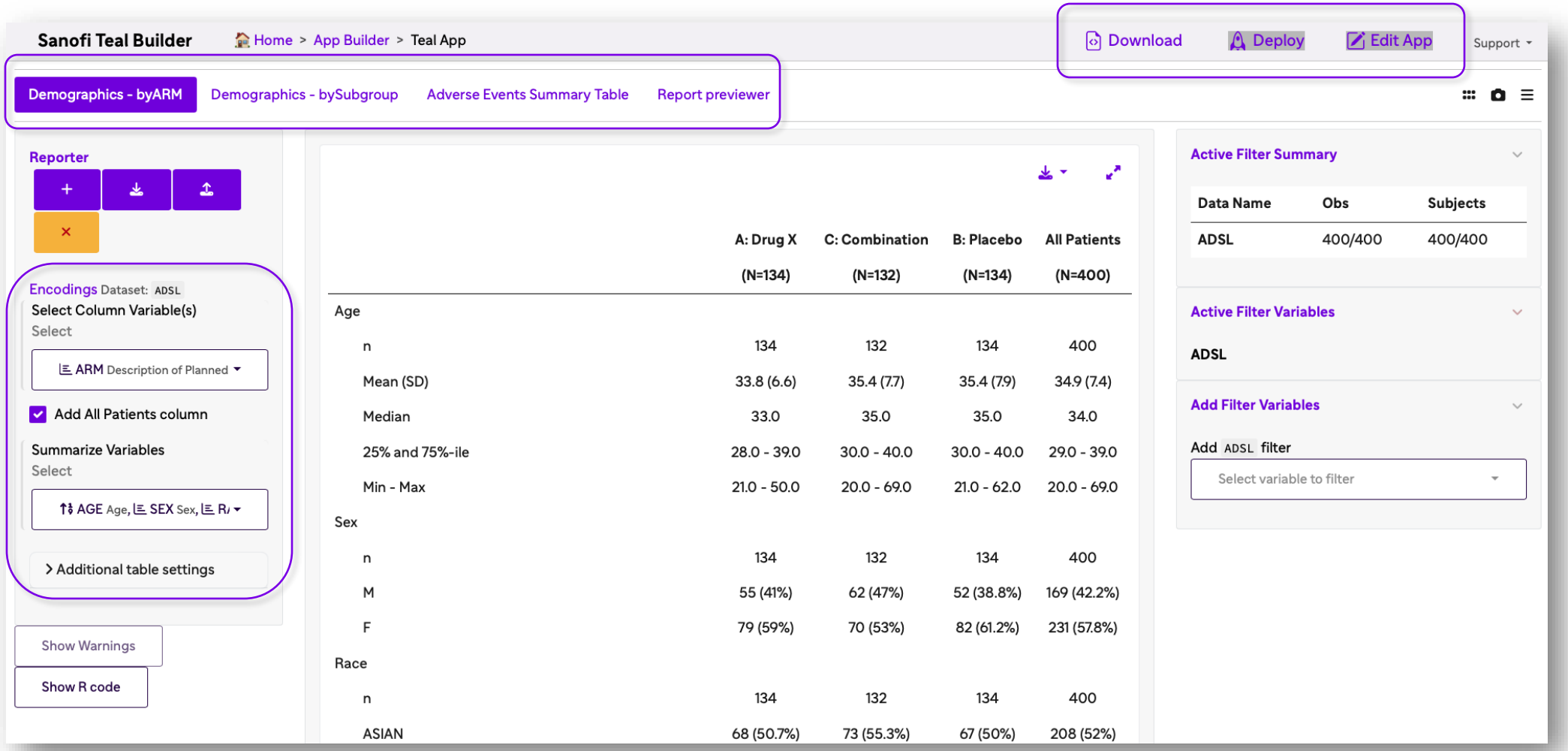
Modules with Configuration Feature



Configuration Panel for One Module

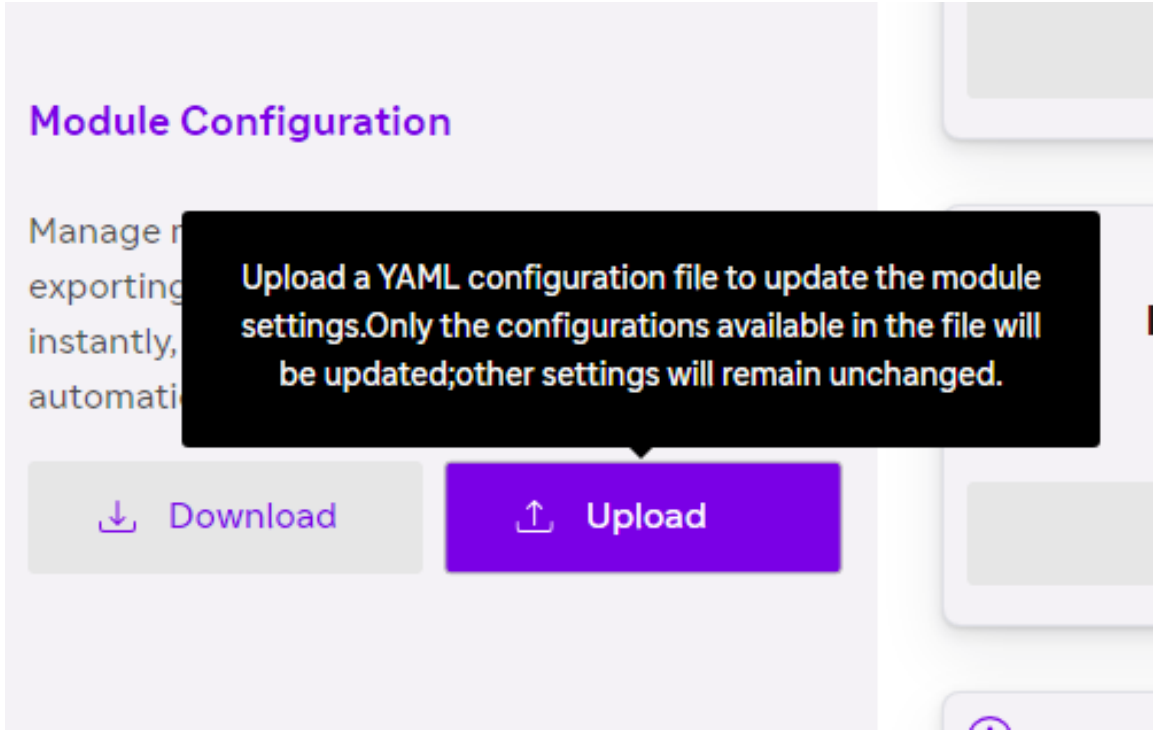


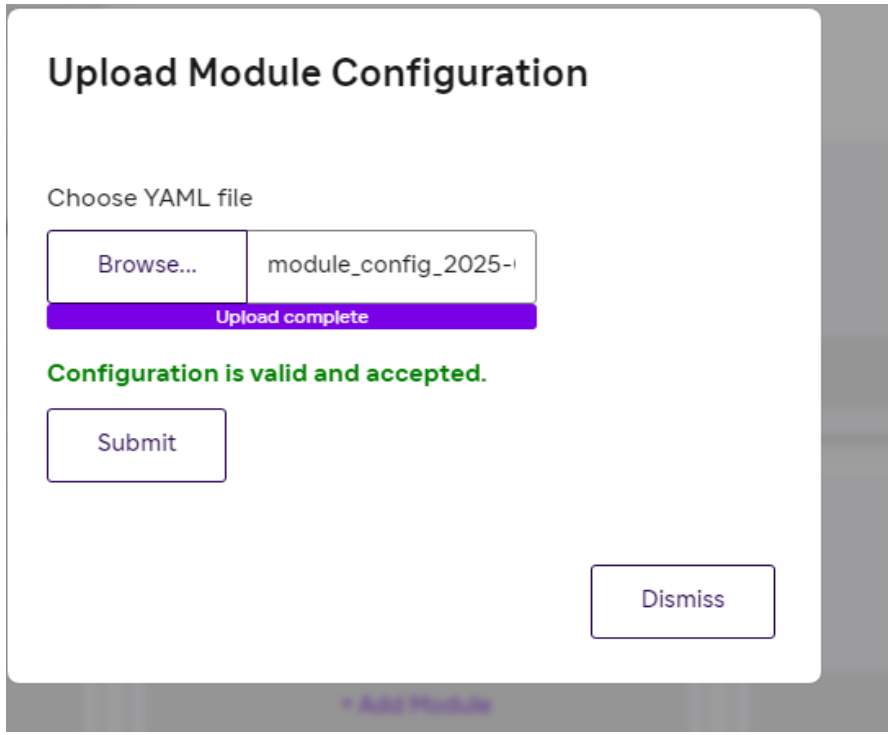
Teal App After Configuration



Exporting and Importing

- **Download:** Module-level configuration can be downloaded as YAML file, on the module selection page.
- **Upload**: Previously downloaded configurations can be uploaded using the "Upload" button.





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Conclusion

Add Business Value: Built in close collaboration with business on live study-level pilots.

Focus on efficiency & scalability in clinical data workflows.

- Quick interactive data exploration via self-service
- Grow internal expert team: R and Shiny/Teal knowledge is needed for study-level customization

Continued engagement in the open-source community

- Path to regulatory adoption via cross-industry collaboration
- Longer lifespan than closed-source alternatives
- Fosters community-driven innovation
- Promotes transferable skills and talent

Acknowledgement

- We thank {teal} development team for their open-source innovation and for providing such exceptional tools.
- We thank PHUSE working group on Teal Enhancements for Cross-Industry Adoption for the discussion and collaboration platform.
- We thank our Sanofi colleagues and the development team: **Gautier Paux, Qi Zhang, Shilpy Malla, Guy Blate, Paulin Charliquart, Andrew McNeil, Crystal Luckett, Aleks Chlebowski, Edward Gillian, Chenghua Wu, Ying Wen, Kartikey Kirar**, for their contribution in the development of this tool.

Thank You

Contact:
Freeman Wang (freeman.wang@sanofi.com)
Andre Couturier (andre.couturier@sanofi.com)

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