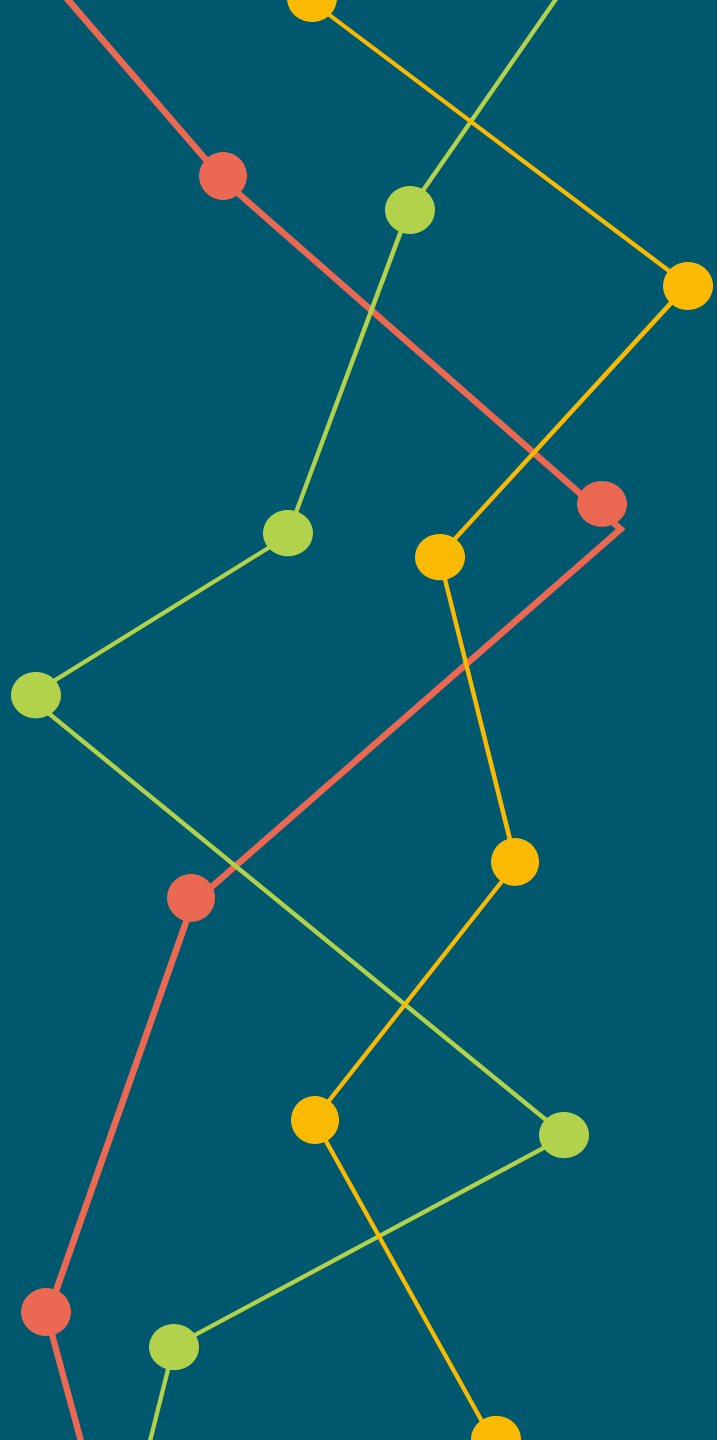


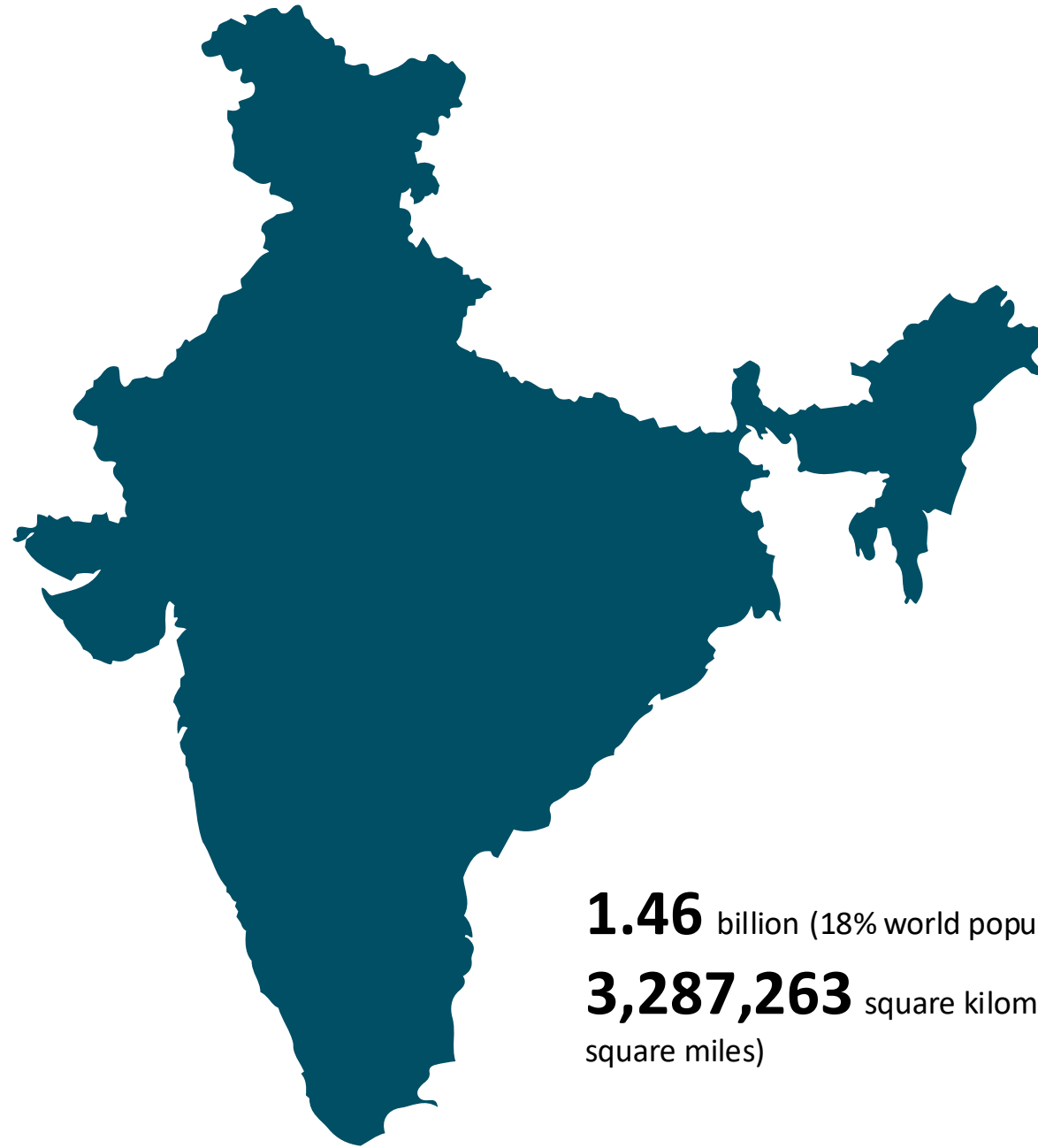


From Insights to Action: Harnessing Data Visualization for Clinical Research

*Craig McIlhoney
Sr. Vice President, Catalyst Flex*

*PHUSE SDE - Hyderabad
June 2025*



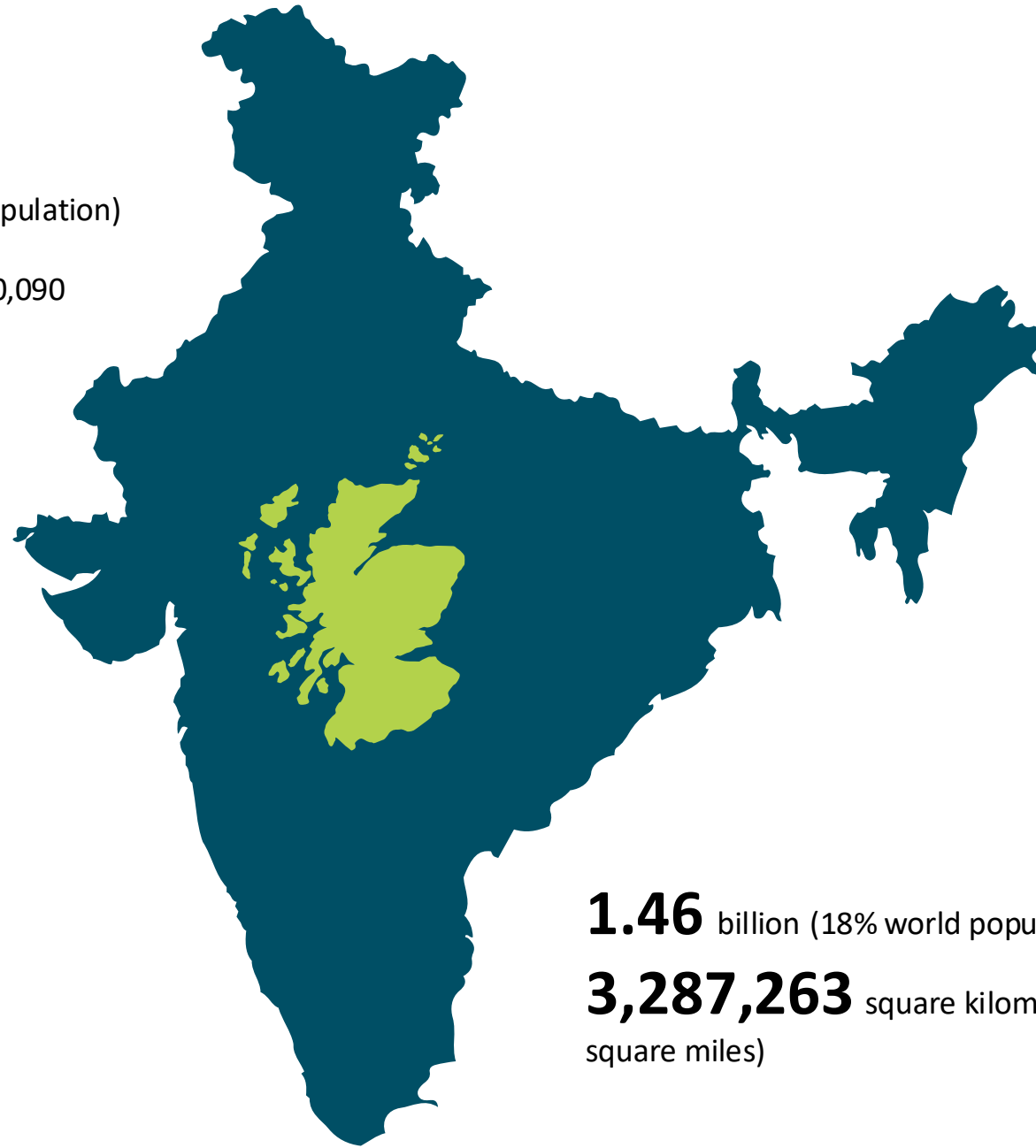


1.46 billion (18% world population)

3,287,263 square kilometers (about 1,269,219 square miles)

5.5 million population (0.07% world population)

77,900 square kilometers (about 30,090 square miles)



1.46 billion (18% world population)

3,287,263 square kilometers (about 1,269,219 square miles)

scottish impact on popular culture



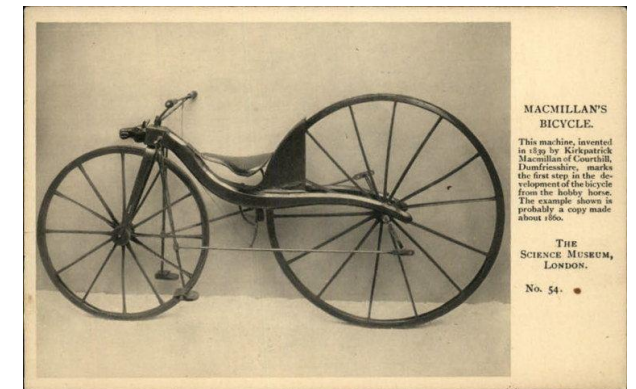
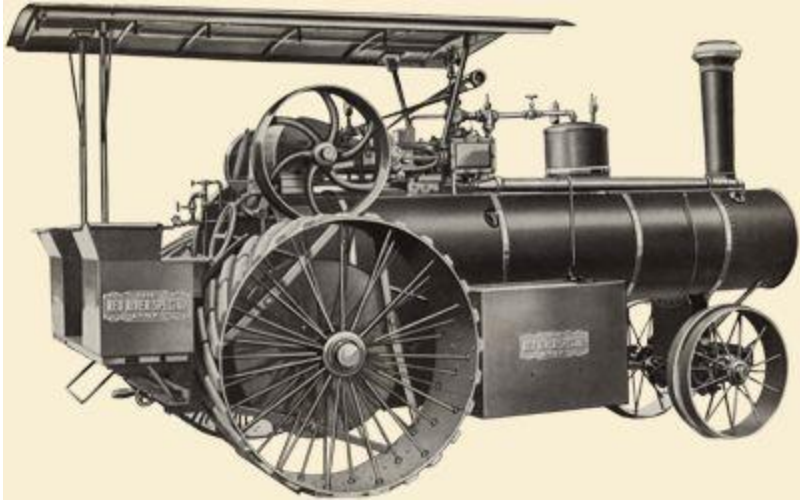
grand
theft
auto



Harry Potter



scottish inventions

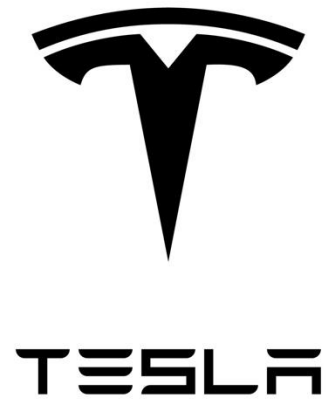


 **BlackBerry**

 **Apple**



NETFLIX



amazon

BORDERS





catalytics: clinical analytics

Central location
for study
intelligence

Able to integrate
with multiple
data sources

Microsoft
cloud-based
platform
Power BI

Compliant with
industry standard
data structures
(CDISC)

Self-
service access
24/7

Data
transparency

catalytics: modules

 Power BI

Patient Safety

Aggregate summaries:
Demography, disposition,
AEs and correlating tests
across all patients

Study Oversight

Operational oversight
metrics:
CTMS and KPI reporting

Patient-Level Summaries

Single patient summaries:
Compiled data across
domains for each patient

Clinical Efficacy

Response assessments &
disease status

Data Sources



Data Ingestion & Mapping



Data Consolidation, Storage & Analysis



Intelligent Analytics



Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



microsoft power bi as an industry leader

(Gartner 2021)

Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



Fully
scalable



User
friendly



Cloud
based



Integrates
with other
Microsoft
services



Meets all
regulatory +
compliance
standards



Secure

catalytics: study oversight



- Standard study oversight dashboard offering
 - Visualization through Power BI
 - One view for Catalyst and Sponsor
 - Monthly data refresh
- Provides sponsor transparency to ongoing study status
- Supports sponsor obligation to provide oversight of CRO

Study Oversight - DEMO

Data updated 3/12/25

Search

Study Oversight - DEMO

Safety - DEMO

Safety & Efficacy - DEMO

File

Share

Export

Set alert

Catalytics (Demo)

Study Oversight - DEMO

Home

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Site Activation

Patient Enrollment

Monitoring Compliance

Data Currency

Query Aging

Protocol Deviations

Safety Metrics

Risks

TMF Compliance

Staff Turnover

STUDY OVERSIGHT

Version 3.3 R1

Logged in As:

Chris.Simmons@catalystcr.com

Available Accounts:

Demo Sponsor

Available Studies:

Demo Study

Welcome to the Catalytics Study Oversight Module

Please select your study from the available studies listed in the dropdown. Only studies available to you are displayed.

Navigation:

Click on the menu items on the left-hand side of the screen to navigate through the modules

If you have any questions about the data contained within the module, please contact your Catalyst Project Manager or key Catalyst contact.

For technical support please contact: clinicalanalyticsteam@catalystcr.com

CATALYST

Study Oversight - DEMO

Data updated 3/12/25

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STUDY OVERSIGHT

Demo Study

Source: CTMS / Date: 3/12/2025

Study Milestone	Completed (Y/N)	Planned Date	Revised Date	Actual Date
Final Protocol	Y	14-Oct-2022		14-Oct-2022
Date Final Protocol Received	Y	14-Oct-2022		14-Oct-2022
Protocol Amendment 1	Y	20-Jul-2023		20-Jul-2023
Protocol Amendment 2	Y	14-Mar-2024		14-Mar-2024
First Site Open	Y	30-Dec-2022	20-Jan-2023	20-Jan-2023
First Subject Screened	Y	30-Dec-2022		09-Mar-2023
First Subject Enrolled	Y	30-Dec-2022	27-Mar-2023	09-Mar-2023
Last Site Open		28-Jun-2024		31-Jul-2025
Last Subject Screened		30-Aug-2024		31-Mar-2026
Last Subject Enrolled		03-Feb-2025		01-Apr-2026
Last Subject Last Visit		01-Sep-2025		27-Sep-2026
Database Lock		01-Dec-2025		27-Dec-2026
First Interpretable Results		31-Jan-2026		26-Feb-2027
Final CSR		30-Jun-2026		31-Mar-2027

Study Oversight - DEMO

Data updated 3/12/25

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STUDY OVERSIGHT

Demo Study

Source: KPI Trackers / Date: 3/12/2025

Site Activation (Planned vs Actual)

Month

Planned Sites Activated (in Month)

Actual Sites Activated (in Month)

Actual Sites Activated (Cumulative)

Month	Planned Sites Activated (in Month)	Actual Sites Activated (in Month)	Actual Sites Activated (Cumulative)
Jan 2023	1	1	1
Feb 2023	1	1	2
Mar 2023	1	0	2
Apr 2023	1	0	2
May 2023	0	0	2
Jun 2023	0	0	2
Jul 2023	2	1	3
Aug 2023	4	2	5
Sep 2023	3	2	7
Oct 2023	2	0	7
Nov 2023	2	2	9

Study Oversight - DEMO

Data updated 3/12/25

Search

Study Oversight - DEMO

Safety - DEMO

Safety & Efficacy - DEMO

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STUDY OVERSIGHT

Demo Study

Source: KPI Trackers / Date: 3/12/2025

Query Status - Latest Reporting Month / Year

Open Query Age - Latest Reporting Month / Year

Answered Query Age - Latest Reporting Month / Year

Total Open Queries	% Queries Open	Total Closed Queries	% Queries Closed	Total Answered Queries	% Queries Answered
779	2.05%	36770	96.67%	487	1.28%

Queries Open 30 Days	Queries Open 31-60 Days	Queries Open 61-90 Days	Queries Open 90 Days
504	223	41	11

Project/Protocol	Latest Reporting Month/Year	# Total Queries	# Total Open Queries	# Total Answered Queries	# Total Closed Queries	% Queries Closed	% Queries Answered	% Queries Open
Demo Study	May 2023	646	79	0	567	87.77%	0.00%	12.23%
Demo Study	Jun 2023	779	21	11	747	95.89%	1.41%	2.70%
Demo Study	Jul 2023	1155	110	42	1003	86.84%	3.64%	9.52%
Demo Study	Aug 2023	1594	132	65	1397	87.64%	4.08%	8.28%
Demo Study	Sep 2023	101	39	62			61.39%	38.61%
Demo Study	Oct 2023	2610	85	31	2494	95.56%	1.19%	3.26%
Demo Study	Nov 2023	3418	399	0	3019	88.33%	0.00%	11.67%
Demo Study	Dec 2023	604	531	73			12.09%	87.91%

catalytics: patient safety and efficacy



60+ displays & visualizations



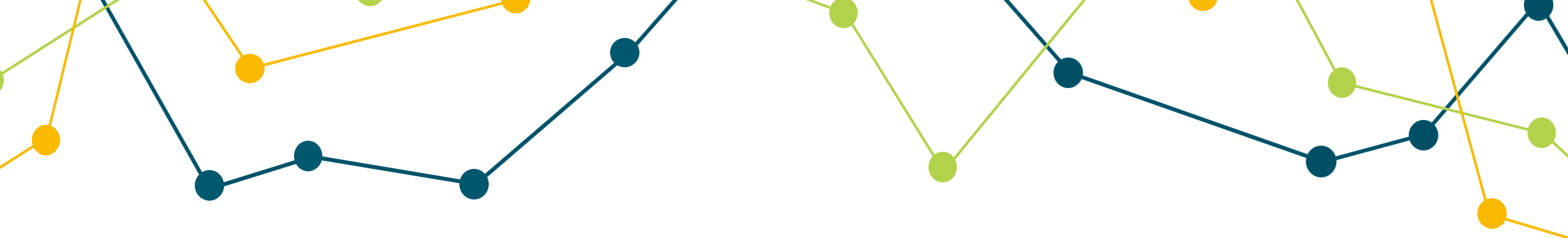
CDISC structured,
domain-specific datasets



Export data to PPT, Excel, PDF



Nightly data refresh



**innovation is about
technology but also people,
processes and better ways of
working**



Submitted Abstract

Throughout history there are numerous examples that exemplify how technical advances build upon each other to have a global impact. In today's tech-driven world, this influence is magnified, but it's crucial to avoid overwhelming users with too much information. Effective data visualization, as seen in sports, TV, and mobile apps, should be intuitive and user-friendly. Learning from the tech industry's successes and failures, such as Apple and Blackberry, highlights the importance of simplicity. In clinical research, we have many tools to create impactful visualizations and aid decision making by focusing on user needs. As the clinical research industry builds on past learnings and embraces AI and machine learning, we must remain able to better support our goal to deliver value and benefit patients.