

The background is a collage of medical and scientific imagery. It includes a stethoscope, an IV drip chamber, a calculator, and several white pills. A line graph is overlaid on the bottom left, showing an upward trend. The overall color scheme is a mix of teal, blue, and yellow.

Health Science, Clinical Research

Visualise me!

Down the rabbit hole with standardized
dashboards for safety and study follow-up

DV06

Health Inspired,
Quality Driven.



Disclaimer and disclosures

The views and opinions expressed in this presentation are those of the author(s) and do not necessarily reflect the opinions of PHUSE members, respective companies or organizations.

Curiouser and curiouser

Strange?

Or

Investigative!





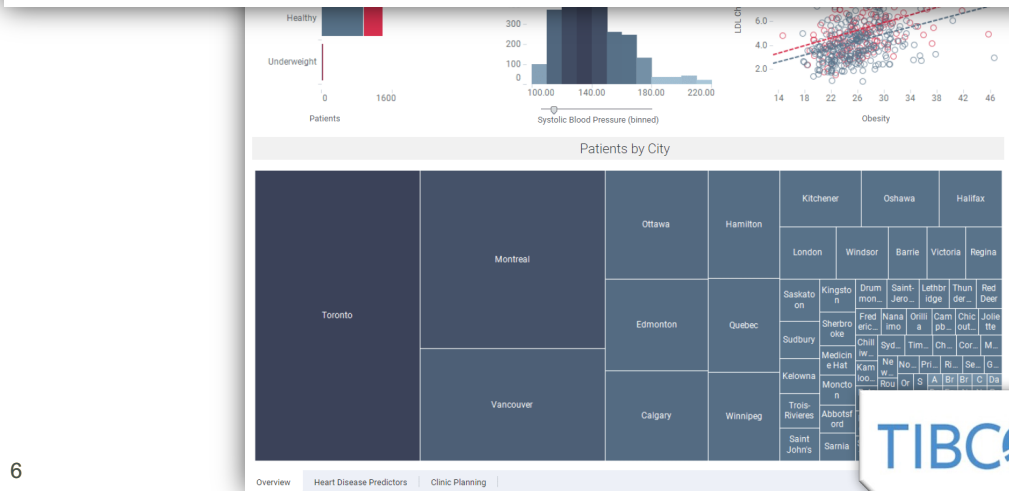
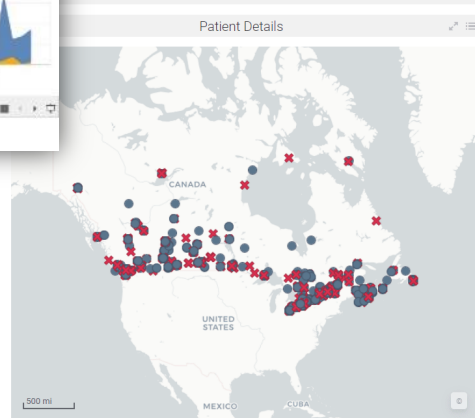
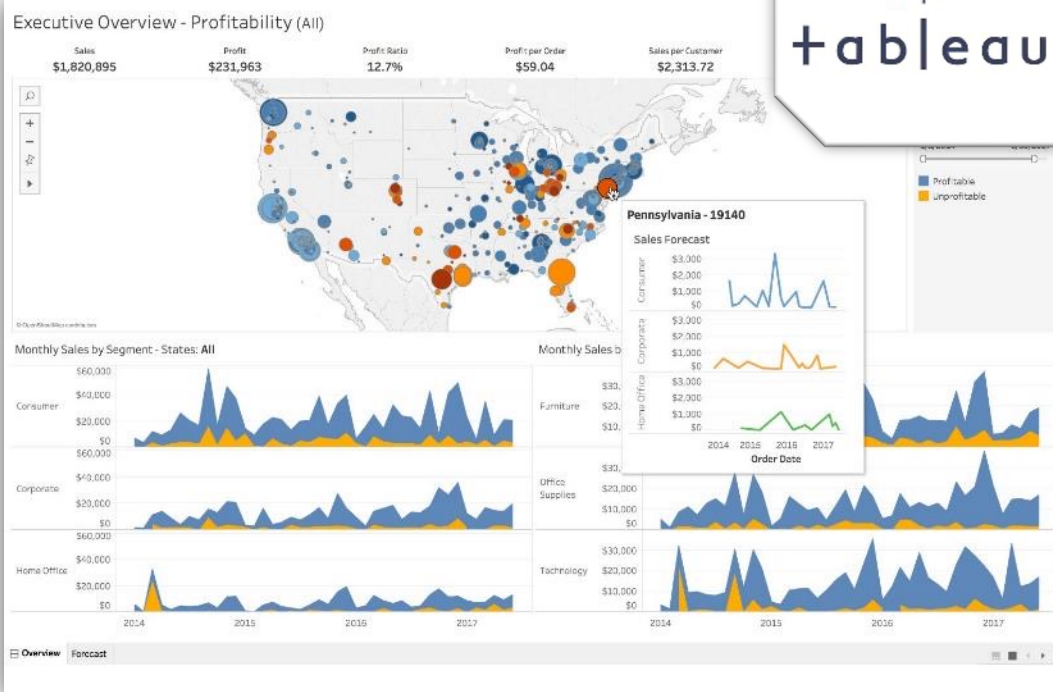
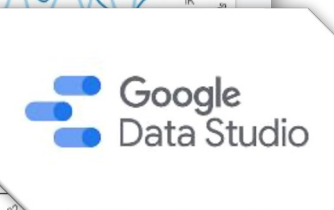
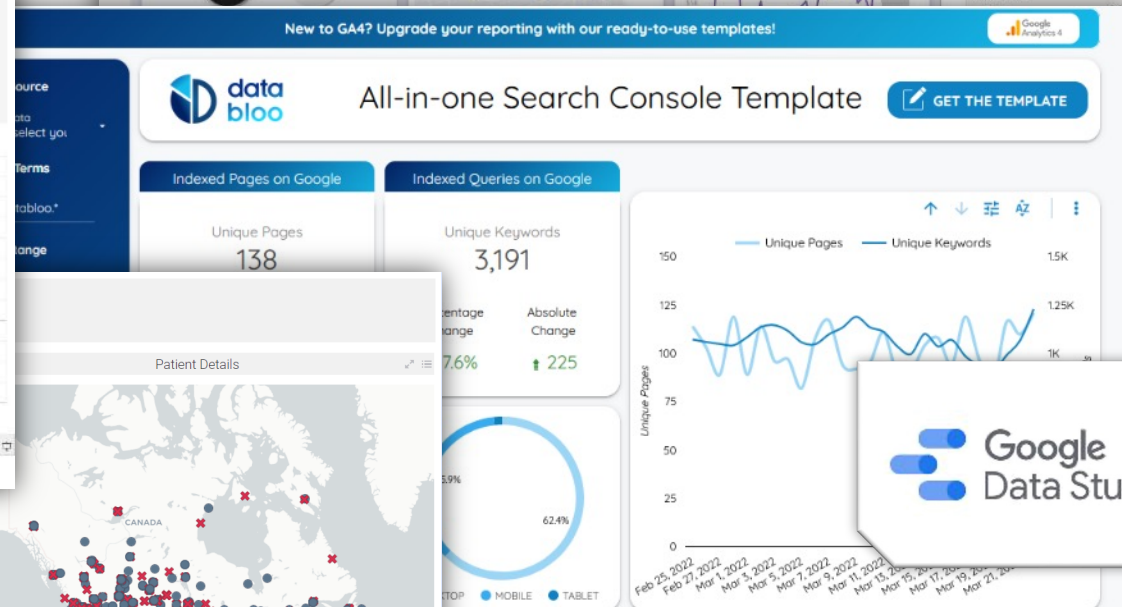
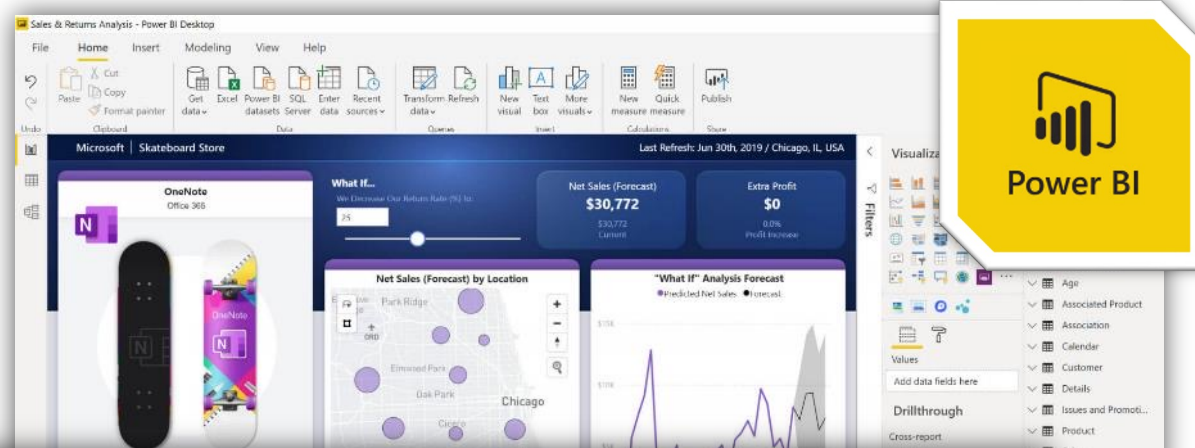
Visualization of clinical data

- Our clients want to track study progression & subject safety, see how their sites are performing...
 - High and urgent demand!
 - From the moment a study goes live!
 - Meaningful insights in real-time

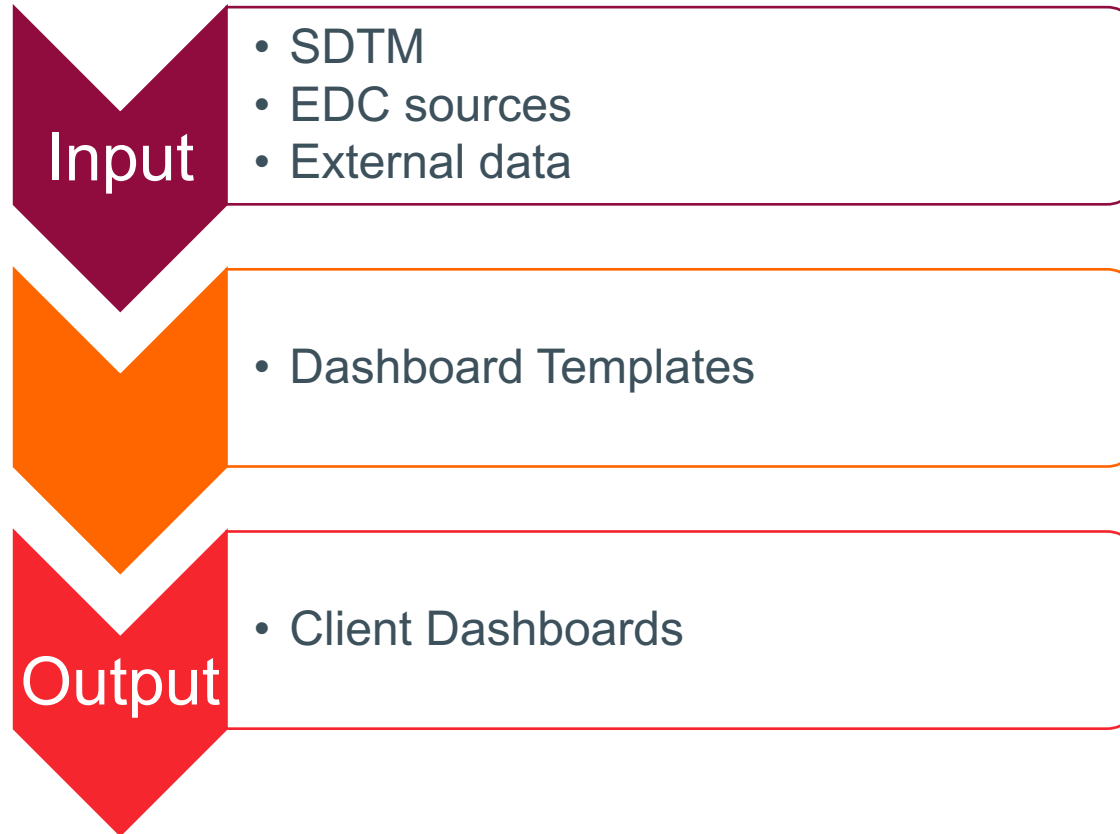
Visualization of clinical data

- Create data visualization dashboards that can be deployed quickly and easily
- But this is not always evident
 - Creating meaningful and easy-to-understand dashboards is difficult and time consuming
 - Input data can take different forms and structures, come from different sources

Tools & Software

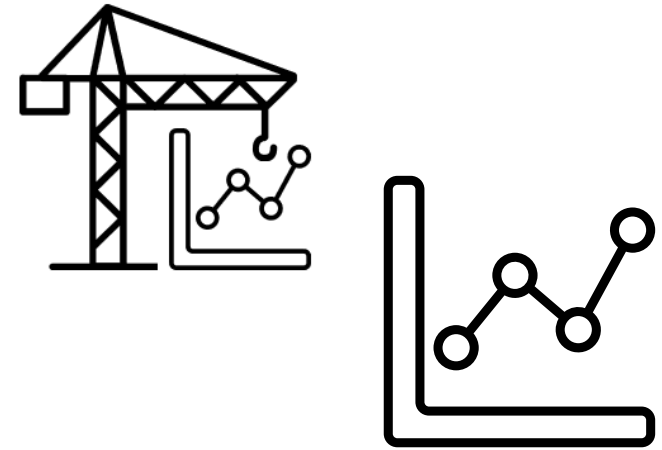


How we do it at SGS



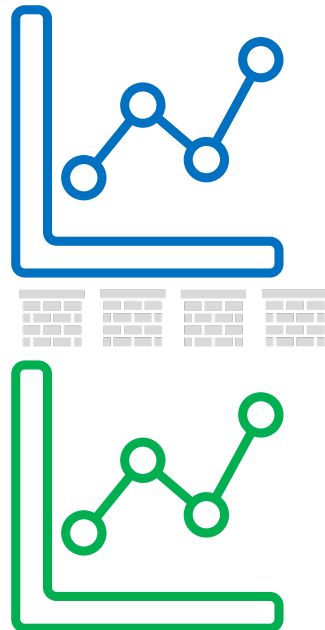
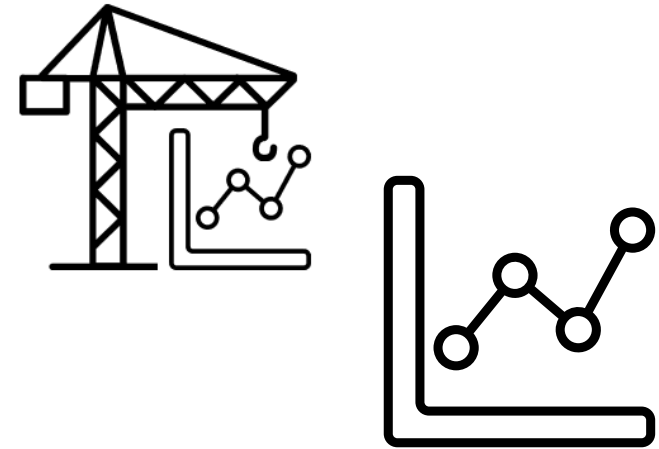
How we do it at SGS

- These templates can be deployed:
 - Internally in a study to quickly go from a quality control environment to production



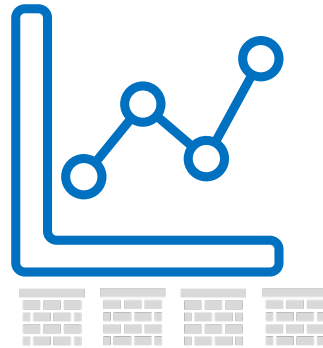
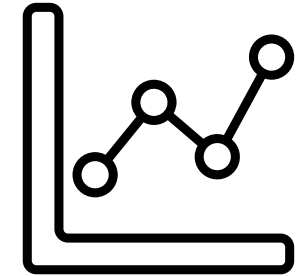
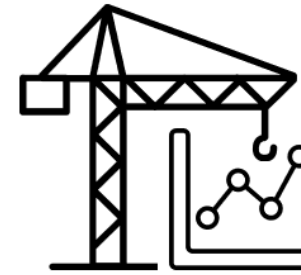
How we do it at SGS

- These templates can be deployed:
 - Internally in a study to quickly go from a quality control environment to production
 - Between different studies of a same client



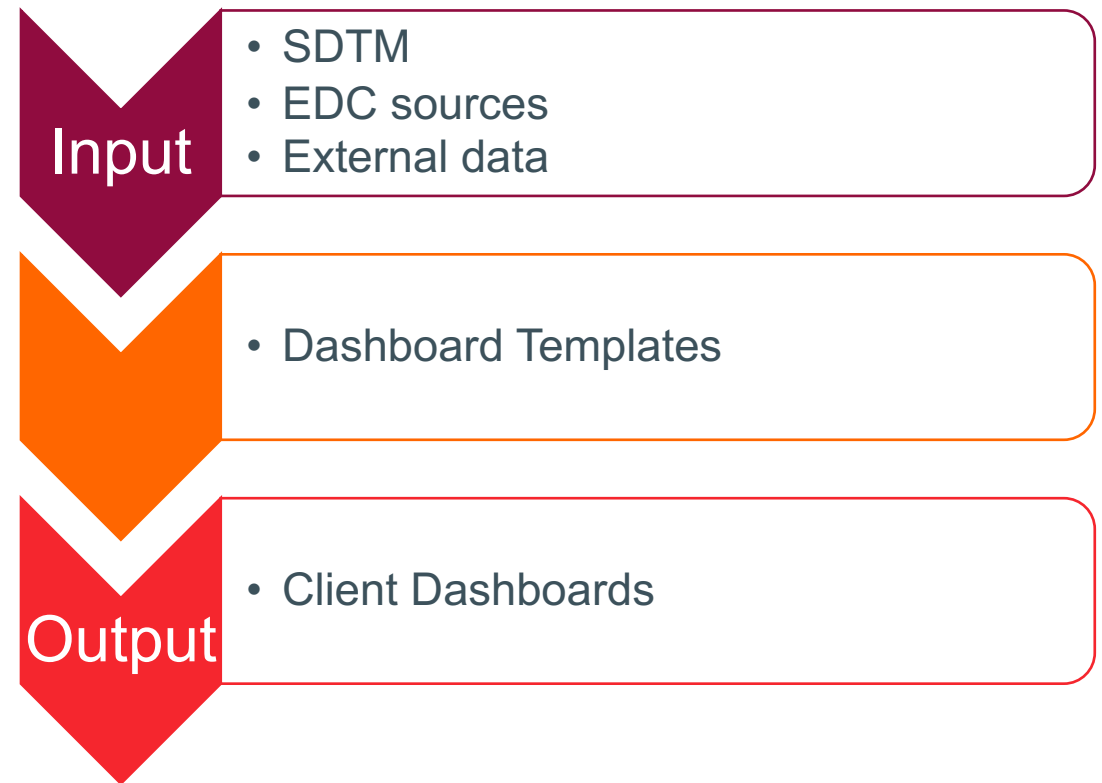
How we do it at SGS

- These templates can be deployed:
 - Internally in a study to quickly go from a quality control environment to production
 - Between different studies of a same client
 - Over trials from different clients!



From Data to Dashboard

- Pipeline created that will take input data:
 - EDC files
 - SDTM SAS files
- Updated datasets will be copied to a Tableau server when changes are detected
- Relevant dashboards will be 'refreshed' to show the new information



From Data to Dashboard

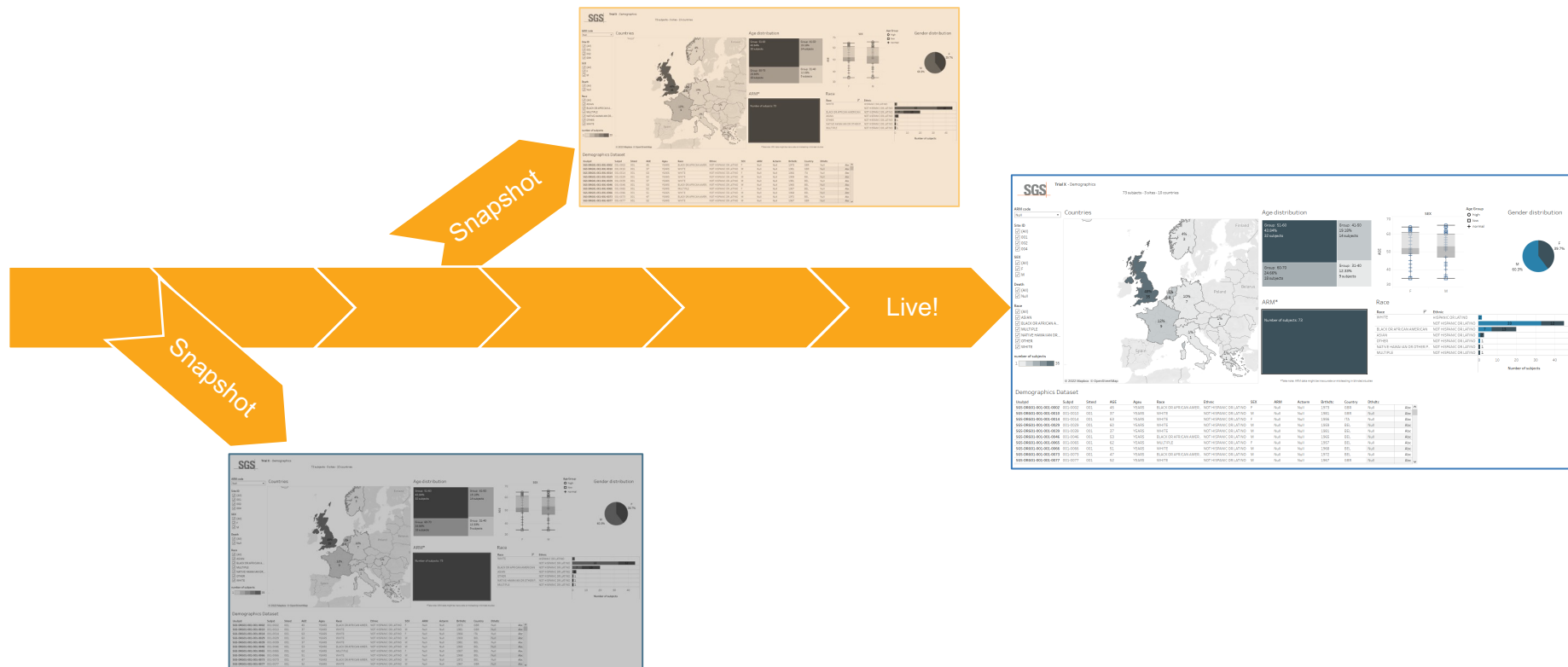


- As part of the standard SGS DM data conversion process
 - New Data is made available automatically
- A new conversion step activates the DataVis processes
 - The locations of input data and linked dashboards are preconfigured **once**
 - Powershell scripts look for updated datasets
 - Those are uploaded to the Tableau server
 - Only relevant dashboards are refreshed, by using the Tableau REST api
- Automated system knows *what* data go *where*
 - No manual intervention



Interim snapshots

- Dashboards are always up to date BUT
- Need exists for interim 'snapshots'
- Possibility to split off a separate dashboard instance with cut-off datasets



Challenges

- Different clients have different sources of data
 - Challenge to create template dashboards that are compatible with these different inputs
 - Different flavors of SDTM
 - Some data in a dashboard might just not be available
 - Care must be taken to make sure that dashboards will still function
 - And result in the appropriate outcome
 - Client expectations might go beyond the standard dashboards
 - A team of DataVis professionals is available
 - Even for the creation of custom, client-specific dashboards!



Future explorations

- Validation limited to client specific changes of standard dashboards
- Real-time data connections
- Use of dashboards for internal purposes
 - In Data Management
 - And even other departments
- Beyond clinical data
 - Site performance
 - Follow-up on cleaning activities
 - ...

Demographics



Trial X - Demographics

73 subjects - 3 sites - 10 countries

ARM code
Null

Countries

Site ID

- ☒ (All)
- ☒ 001
- ☒ 002
- ☒ 004

SEX

- ☒ (All)
- ☒ F
- ☒ M

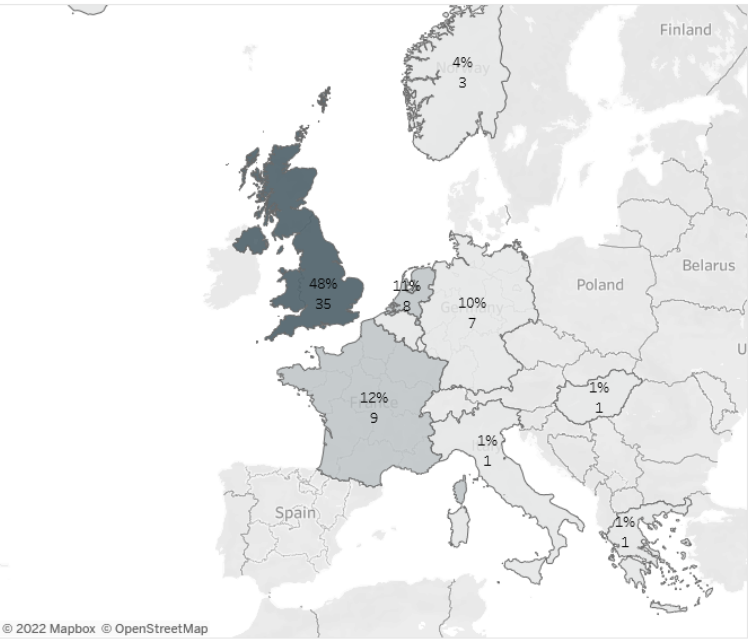
Death

- ☒ (All)
- ☒ Null

Race

- ☒ (All)
- ☒ ASIAN
- ☒ BLACK OR AFRICAN A...
- ☒ MULTIPLE
- ☒ NATIVE HAWAIIAN OR...
- ☒ OTHER
- ☒ WHITE

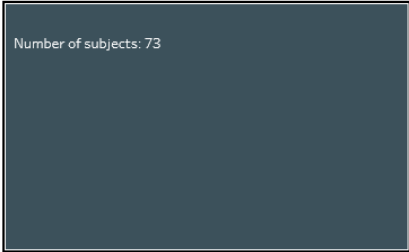
number of subjects



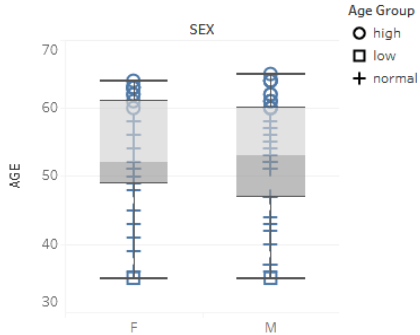
Age distribution



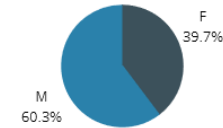
ARM*



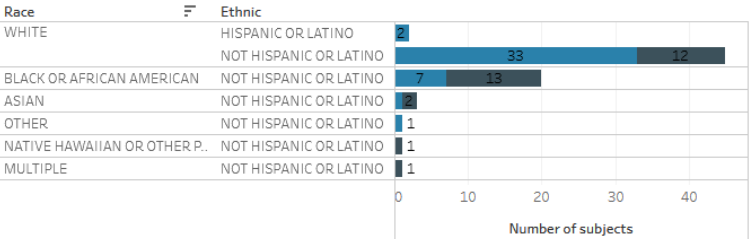
*Take note: ARM data might be inaccurate or misleading in blinded studies



Gender distribution



Race



Demographics Dataset

Usubjid	Subjid	Siteid	AGE	Ageu	Race	Ethnic	SEX	ARM	Actarm	Brthdtc	Country	Dthdtc	Abc
SGS-DRG01-001-0002	001-0002	001	45	YEARS	BLACK OR AFRICAN AMER...	NOT HISPANIC OR LATINO	F	Null	Null	1973	GBR	Null	Abc
SGS-DRG01-001-0010	001-0010	001	37	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1981	GBR	Null	Abc
SGS-DRG01-001-0014	001-0014	001	63	YEARS	WHITE	NOT HISPANIC OR LATINO	F	Null	Null	1956	ITA	Null	Abc
SGS-DRG01-001-0029	001-0029	001	60	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1959	BEL	Null	Abc
SGS-DRG01-001-0039	001-0039	001	37	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1981	BEL	Null	Abc
SGS-DRG01-001-0046	001-0046	001	53	YEARS	BLACK OR AFRICAN AMER...	NOT HISPANIC OR LATINO	M	Null	Null	1965	BEL	Null	Abc
SGS-DRG01-001-0065	001-0065	001	62	YEARS	MULTIPLE	NOT HISPANIC OR LATINO	F	Null	Null	1957	BEL	Null	Abc
SGS-DRG01-001-0066	001-0066	001	51	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1968	BEL	Null	Abc
SGS-DRG01-001-0073	001-0073	001	47	YEARS	BLACK OR AFRICAN AMER...	NOT HISPANIC OR LATINO	M	Null	Null	1972	BEL	Null	Abc
SGS-DRG01-001-0077	001-0077	001	52	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1967	GBR	Null	Abc



Demographics



Trial X - Demographics

3 subjects - 1 sites - 1 countries

ARM code
Null

Countries

Site ID

- ☒ (All)
- ☒ 001
- ☒ 002
- ☒ 004

SEX

- ☒ (All)
- ☒ F
- ☒ M

Death

- ☒ (All)
- ☒ Null

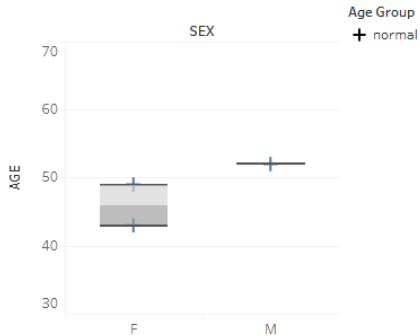
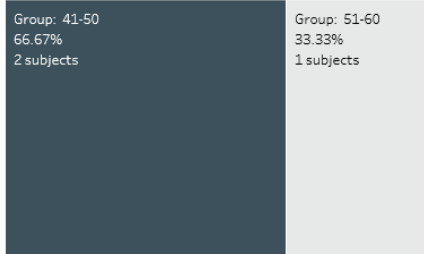
Race

- ☒ (All)
- ☒ ASIAN
- ☒ BLACK OR AFRICAN A...
- ☒ MULTIPLE
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- ☒ OTHER
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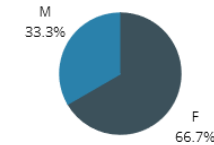
number of subjects



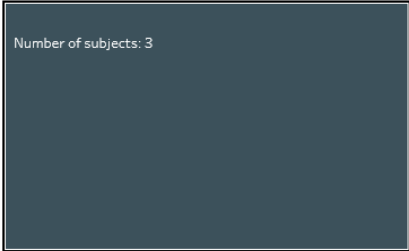
Age distribution



Gender distribution

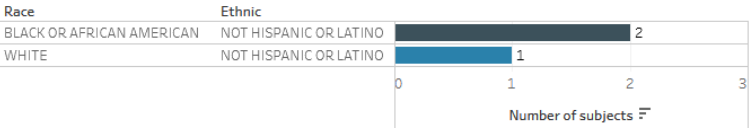


ARM*



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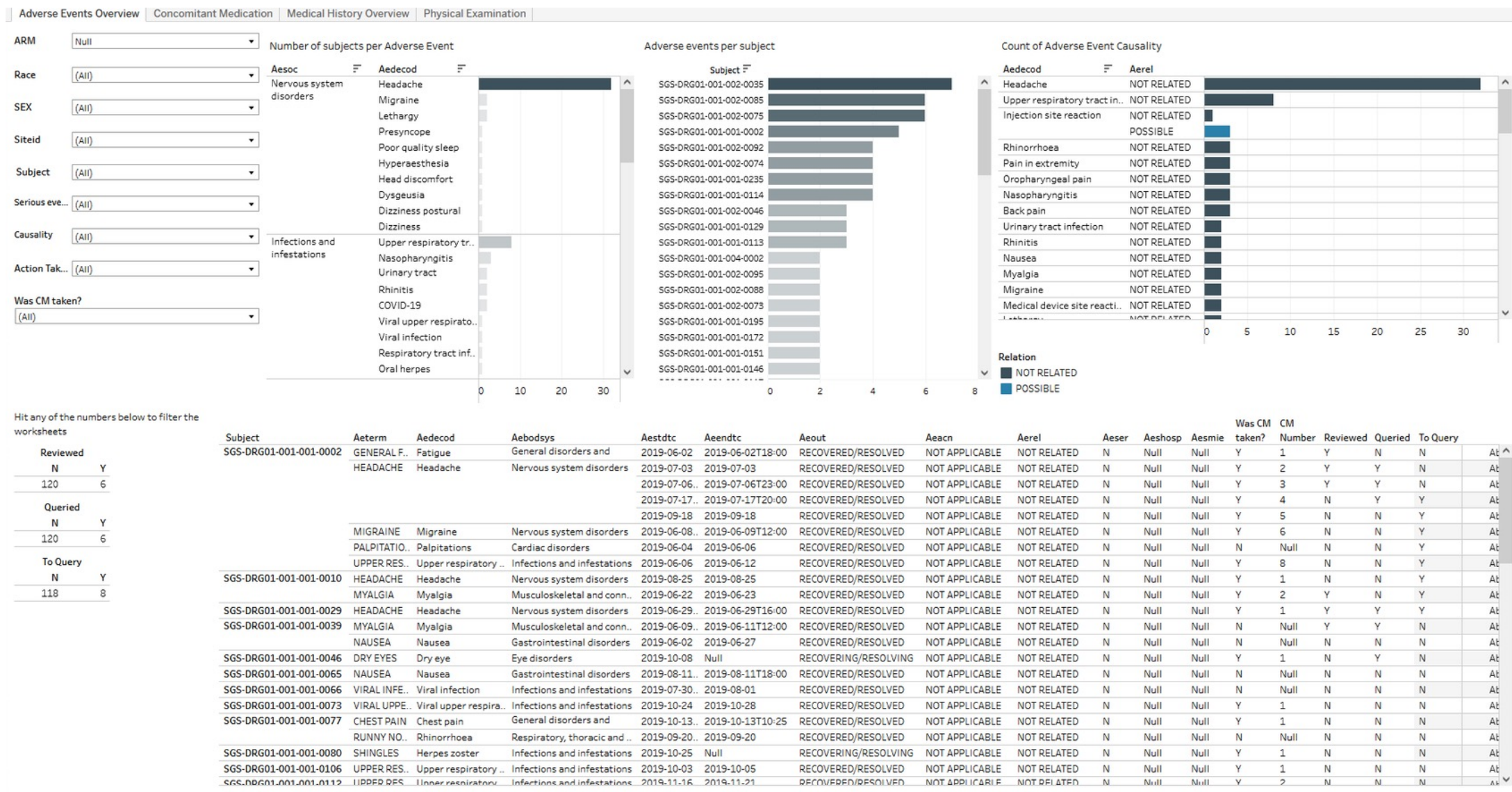
Race



Demographics Dataset

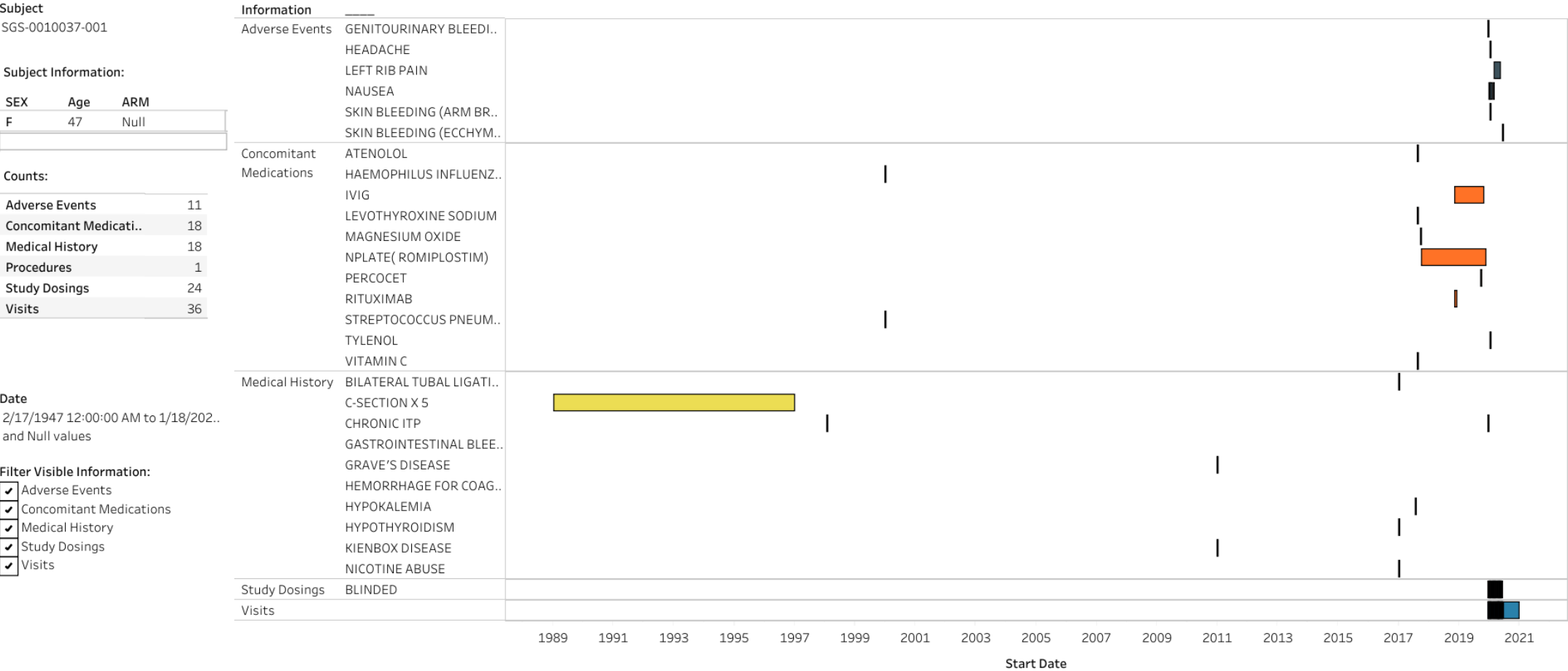
Usubjid	Subjid	Siteid	AGE	Ageu	Race	Ethnic	SEX	ARM	Actarm	Brthdtc	Country	Dthdtc	
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SGS-DRG01-001-0194	001-0194	001	52	YEARS	WHITE	NOT HISPANIC OR LATINO	M	Null	Null	1967	NOR	Null	Abc
SGS-DRG01-001-0195	001-0195	001	49	YEARS	BLACK OR AFRICAN AMER...	NOT HISPANIC OR LATINO	F	Null	Null	1970	NOR	Null	Abc

Adverse Events



■ Patient Profile

This dashboard provides a cross domain visualization about a patient displayed in a timeline related to multiple SDTM datasets.
From the drop-down menu on the left-hand side, you can select the subject.
Use the date slider to filter on a specific period.
You can also choose what information is visible by selecting or deselecting the checkboxes. ...



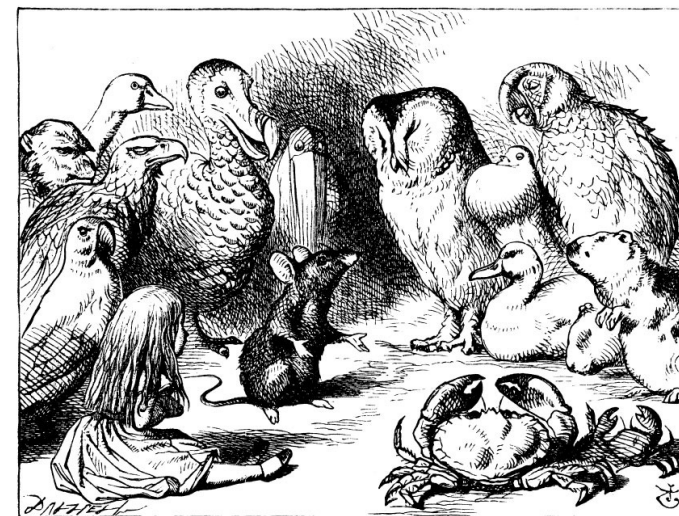
Conclusion

- High demand for meaningful visualisations of clinical trial data
- Template dashboards can be deployed on a per client & trial basis
- Automated processes make this fast and secure
- [Watch our Video!](#)
- Please visit our booth for a chat





Questions?



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