

Statistical Programming in the Future – Our Mindset, Data F.A.I.R.ness, and the Importance of Stakeholder-Relationships*



PHUSE EU Connect Amsterdam
10-13NOV2019

Dipl. Dok. Christoph Ziegler – F. Hoffmann - La Roche, Basel, Switzerland



The Futuristic Agenda

- The Theme – Background and Context
- Soft-Skills vs. Technical Skills
- The Statistical Programming Mindset
- Data F.A.I.R.ness
- Stakeholder Relationships
- Conclusions
- Q&A



The Theme – Background and Context

20xx



The Theme – Background and Context

Theme:

Developing Towards the Future

Description:

Being part of a rapidly evolving working environment requires our continuous interest and training in new techniques, skills and knowledge improvement. Sharing and discussing popular topics such as AI, data visualisation and data science is part of our daily business and a strong backbone of PhUSE.

We want to focus this year's German SDE on not only improving our experience skillset, but also on the first and subsequent steps to get into the statistical programming world, with smart, sustainable training and education concepts.

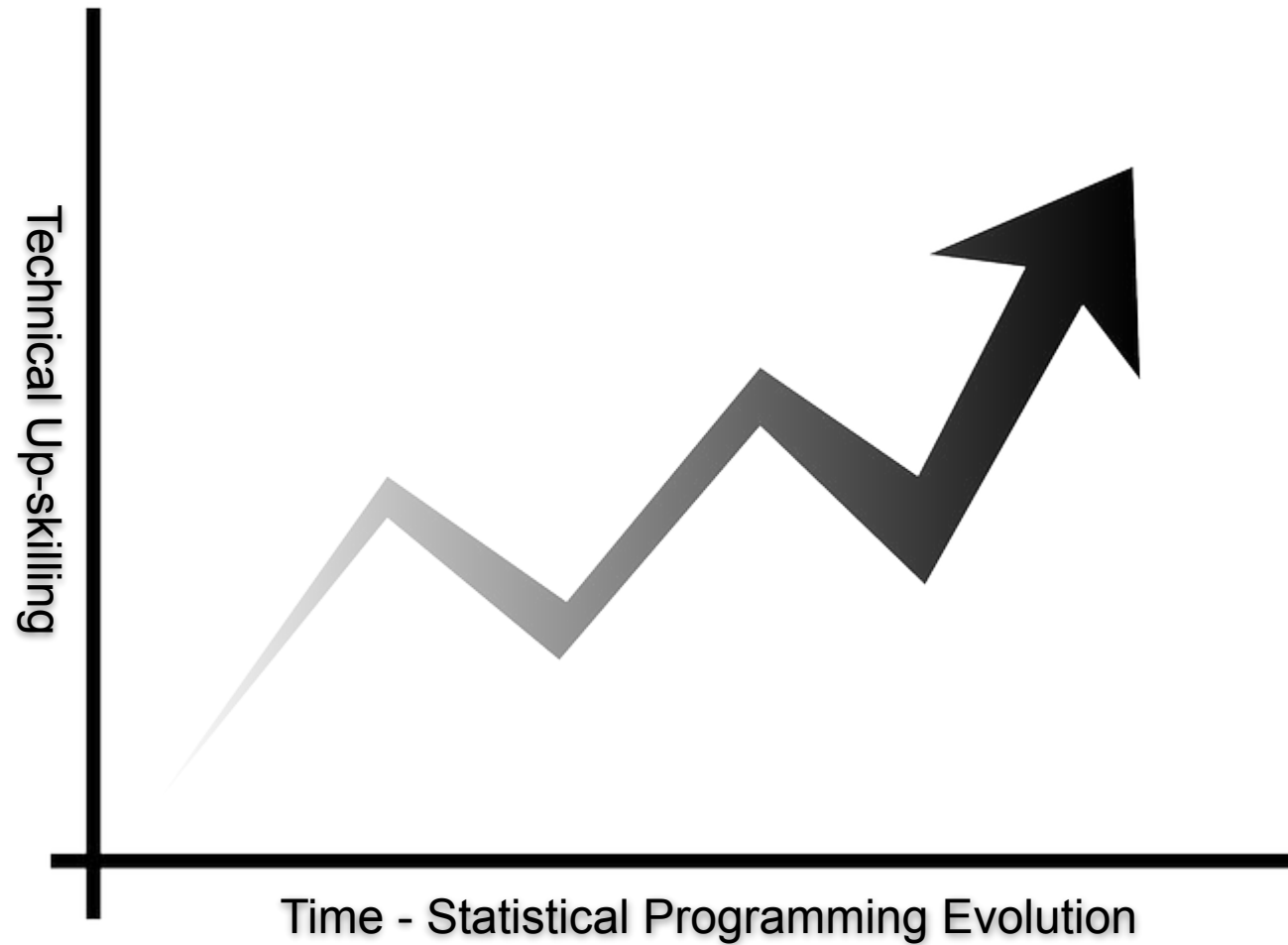


Doing now what patients need next

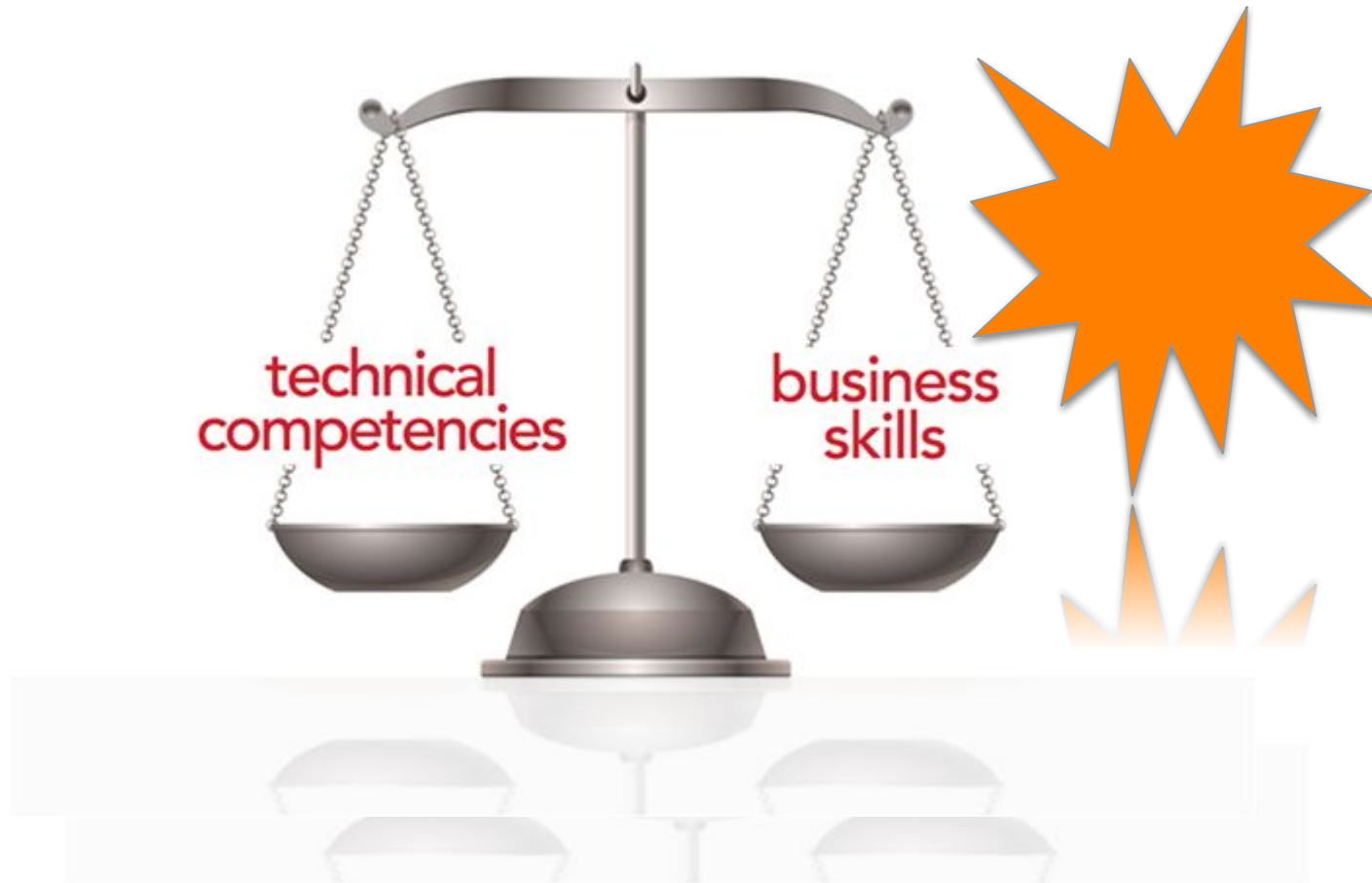


what does Statistical Programming need to do now?
why is speed, agility and change needed?
→ Understanding the Data, Decision Making, Outputs

The Theme – Background and Context



Soft-Skills vs. Technical Skills

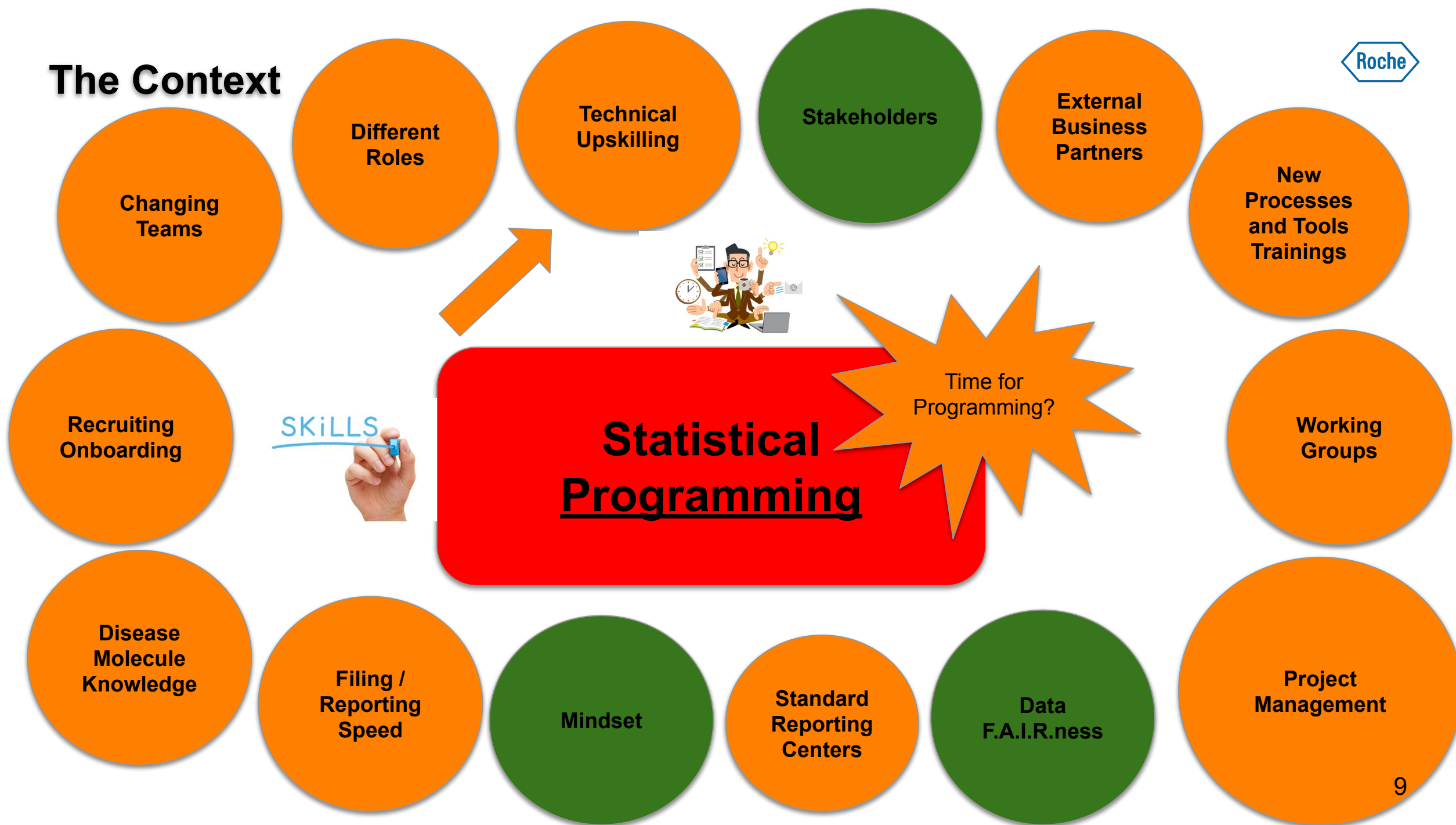


We cannot only look at technical up-skilling (although important!).....

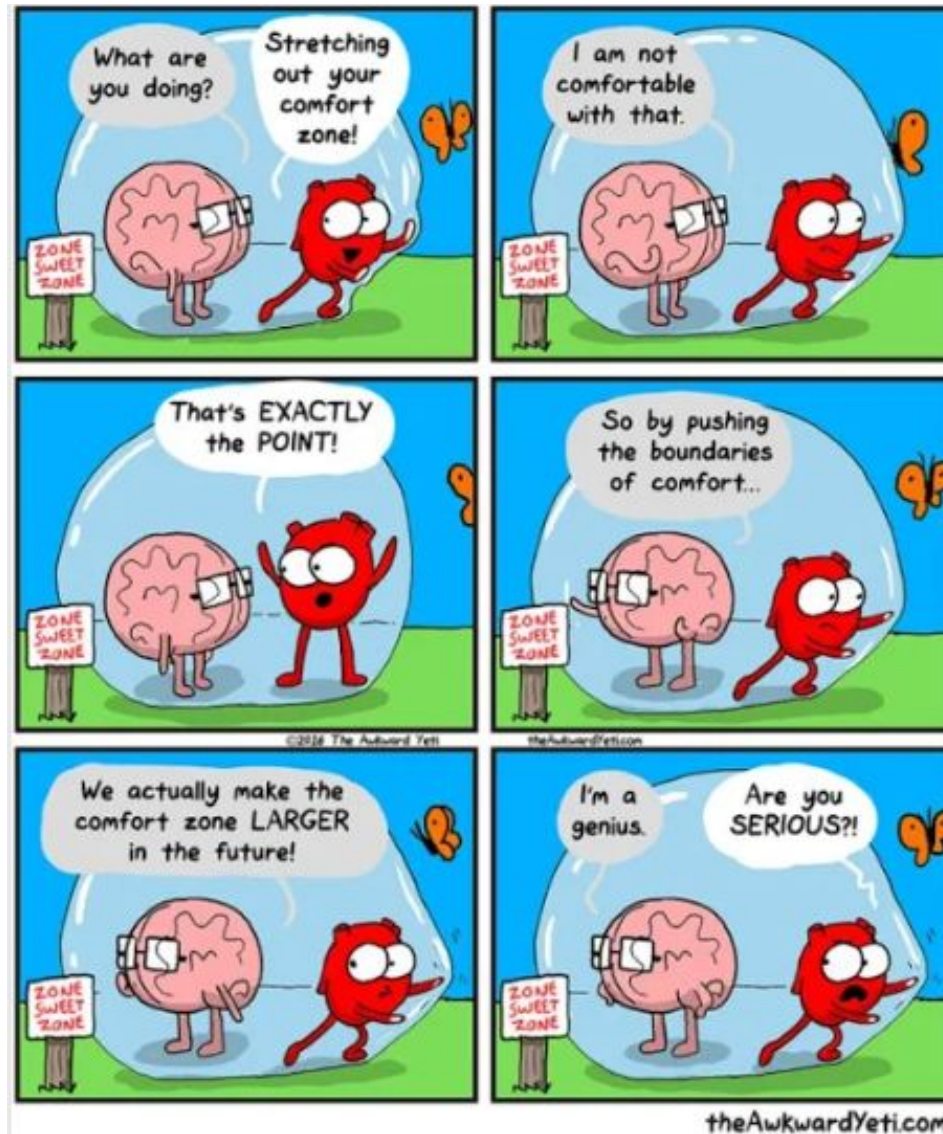
Statistical Programming Evolution



The Context



The Statistical Programming Mindset - Future

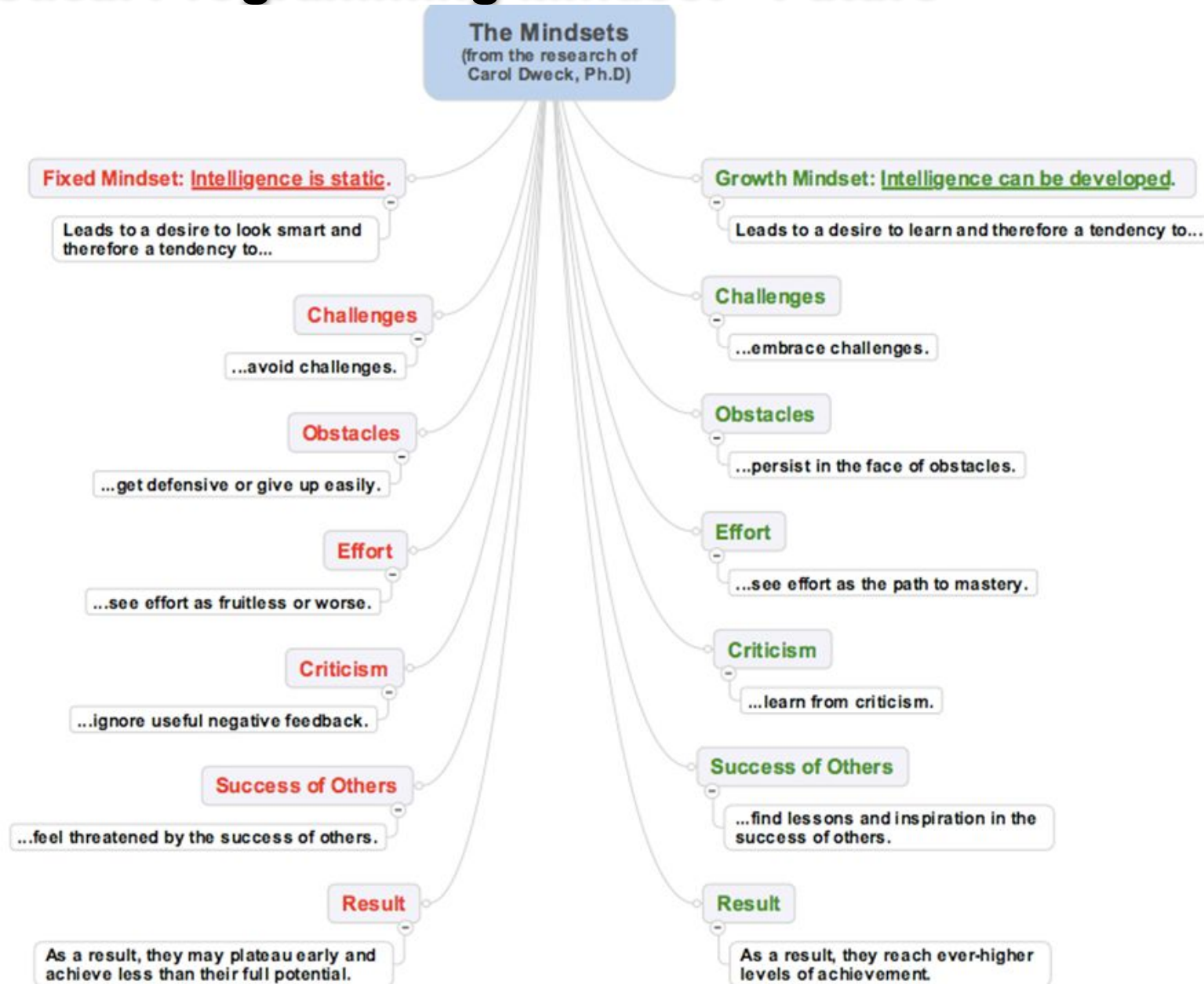


The Statistical Programming Mindset - Future

- Passion & Commitment
- Curiosity / Learning (on-time!)
- **Fixed vs. Growth Mindset**
- Challenge the Status Quo
- Taking Risks
- Understand the Landscape we are in
- Agility & Planning (vs. emergency)
- Speed
- Be smart
- Pro-activity (with stakeholders!)
- Be Empowered
- Value Generation
- Flexibility
- Data Citizens (F.A.I.R.)
- Critical Thinking
- Being an **Equal Partner**
- Automation (we are not there yet!)
- Analytical Strategy
- ---> **Engage with Stakeholders**



The Statistical Programming Mindset - Future



The Statistical Programming Mindset - Future

- Our Behaviors are key to enable Agility and to drive Change
 - **Inclusive & Pleasing → Trusting Others to take the right Decision(s)**
 - **Conservative → Courageous**
 - **Perfectionism → Pragmatic and intuitive**
 - **Rewarding Performers → Rewarding Collaborators and fast Decision Makers**
- We have to embrace ambiguity and feel comfortable with “failing forward “



Data F.A.I.R.ness



Findability

Where are our data?



Accessibility

How can I get the data?



Interoperability

How can I connect or integrate the data?



Reusability

Can our data be easily shared and used again?



Planning



Acquisition



Processing



Release

- Sharing of Data
- Personalized Medicine by meaningful Data Insights

Data F.A.I.R.ness - What can Statistical Programmers do?

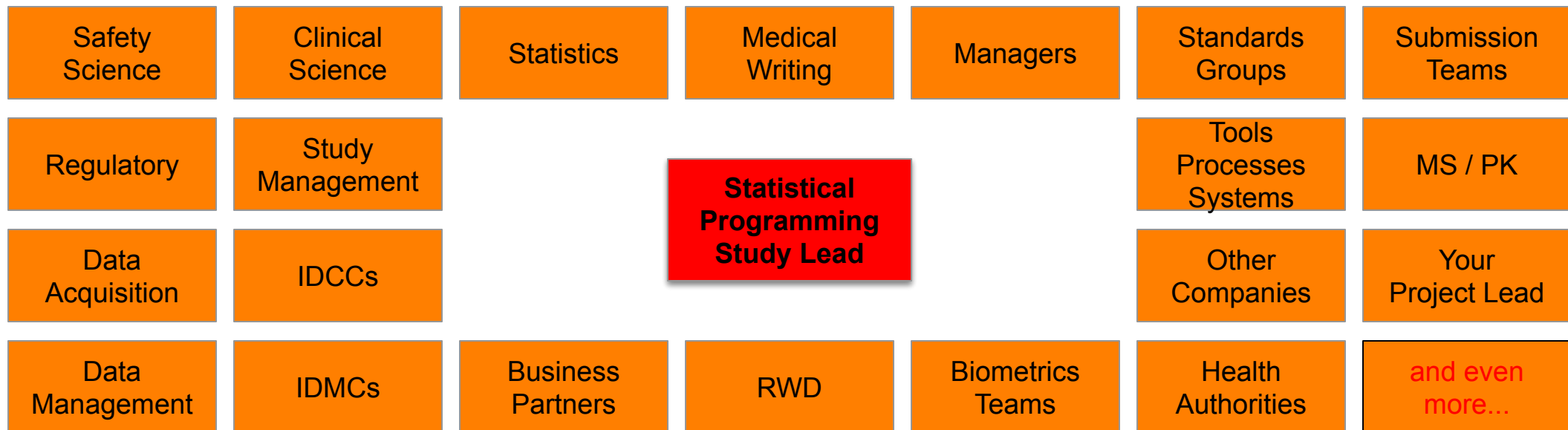
- **Planning**
 - Data Standards, Terminology
 - Vendor, Requirements
 - Metadata
- **Acquisition**
 - Store, Tag, Catalog
 - Conformance
 - Documentation
- **Processing**
 - Workflow Documentation
 - Reproducibility
 - Standard Terminologies and Formats
- **Release**
 - Access for Others
 - Versioning
 - Compliance with Global Data Standards



- **Re-Use**
 - Access policies
 - Use by Others
 - Cite the Source

Stakeholder Relationships

- Who are the stakeholders and the people around us?
- There are lots!



Stakeholder Relationships



Curious and Trusted Partner

Vision:

We drive and continuously evolve Analytics to generate Insights from Healthcare Data to improve Patient Lives

Proactively collaborate with Stakeholders

Think ahead as influential Partner to drive Analytics that advance Drug Development

Stakeholder Relationships

- Be an equal Partner
- Know the Disease / Molecule
- Be pro-active
- Offer alternative Ways of Analyses
- Communication
- Discussion
- Understanding
- Speak the same Language
- Plan together
- Make yourself visible
- Guide your Stakeholders
- Be curious and ask Questions
- Show your Expertise
- Drive Things



Conclusions

- The future for Statistical Programming is much more than just technical up-skilling
- Statistical Programmers need to be aware that there is **really much more**
- Data F.A.I.R.ness, our Mindset and Stakeholder Relationships are just three Aspects
- → although being very important ones!



- “Be an equal Partner and drive / shape Drug Development”



That's a fail, huh?

