STM Tech Trends 2023 WorldTour

Our Band is playing: the Open Science Song

Launching Tech Trends at the
STM US Conference, Innovations Day
12 April 2019, Washington DC
Eefke Smit, Standards and Technology

IEEE
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STM 50
TECH TRENDS WORLD TOUR 2023
ON BASS
COLLABORATE ON INFRASTRUCTURE
Cross Industry
Open Publishing Platforms
Make Infrastructure Connect and Open
Optimize for Big Data and AI
ON GUITAR
TRUST AND INTEGRITY
Data Integrity
Ethics for Data Use
Fact-based Science versus Fake Science
Privacy and Complexity
Trust and My Data
ON VOCALS
OPEN SCIENCE
Reproducibility
Open Publishing Platforms
Publish all Research Artefacts
Workflow Systems
Research Data
ON SAX
A GOOD USER EXPERIENCE
Make it Easy for the User
Personalisation
Decentralised Identity Management
Better Author Metadata
SHARED INFRASTRUCTURE
Interoperability Standards
Cybersecurity
Platform Syndication
Easy Access
RA21
SHARED INFRASTRUCTURE
Share in the Cloud
Amazon Webservices
5G: Ubiquitous Speed and Access
Infrastructure for Plan-S
Blockchain
THE COLLABORATORS
DIVERSITY IN A MULTI-USER ENVIRONMENT
AUTHOR
READER
DOCTOR
ENGINEER
CITIZEN
PARENT
YOUNG RESEARCHER
POLICY MAKER
FUNDER
BASSLINE INFRASTRUCTURE
Collaboration on platforms for:
cost reduction
Transparency
revenue up?
Collaboration on:
Peer Review transparency and transportability
Better user experience
Research data
Platform standards
Blockchain and Open Ledgers
Make Infrastructures connect and open
Efficiency drivers:
Interoperability standards
Publishing platforms
Collaboration
RIFFING ON TRUST AND INTEGRITY
Trust and Integrity tools
Check Research outputs on integrity
Trust vs fake science
Science and politics are dangerous
Trust and (my) Data
Data Integrity, Integrity in Data Use
Privacy versus personalisation
Ethics, Trust
Privacy and Complexity
OUR OPEN SCIENCE SONG
Workflow systems for Open Science
For researcher and consumer
Open Publishing Platforms
Publish ALL research artefacts
Peer Review-plus (transform it)
From Content facilitators to creators of Tech Tools
Reproducibility
Growth of Research Data
Impact of new output types:
Data
AI output
How library services
Google stuff
A GROOVY USER EXPERIENCE
Customer wears many hats
Get used to Multiple Users
Disconnect buyers and users
Who IS the user?
Can she be a machine?
Include the baffled user
Author-based publishing (from journals to article primacy)
Access (open, universal, easy)
Personalization
Decentralised Identity Management

This was our Future Lab brainstorm this year, on 3 December 2018 in London:

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At The Stables, London: Brainstorm in Delphi-method mode

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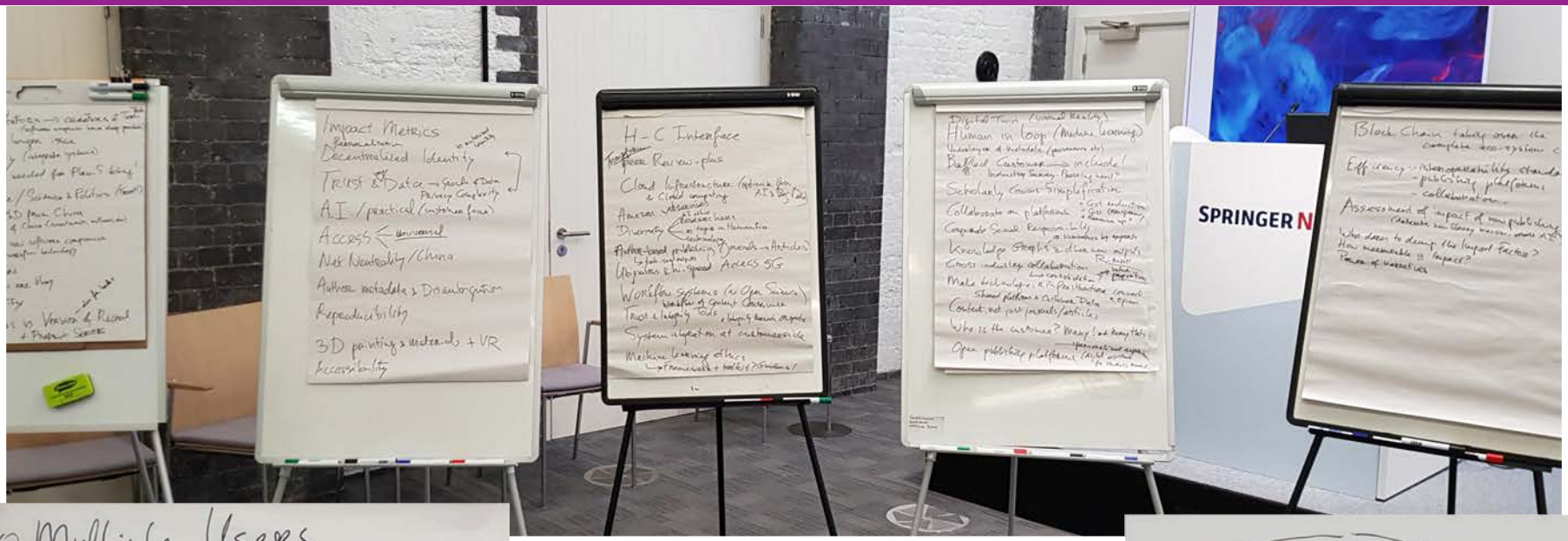

① Multiple Users
→ disconnect buyers - users
→ who is the user?
→ a machine?

② Data Integrity
→ privacy vs. personalisation
→ Ethics, Trust

③ AI / Machine Learning, Research Flow
also for internal systems

④ Collaboration via Cloud across Industry
- preprint review
- blockchain
- platform standards
- Research Data
- user experience

⑤ Trust & Integrity
- SciHub

A room full of views

An Editing Committee processes the stuff:

- Heather Staines, Hypothesis
- Renny Guida, IEEE
- Jasper Simons, APA
- Liz Marchant, T&F
- Sameer Shariff, Impelsys
- IJsbrand-Jan Aalbersberg, Chair
- Eefke Smit, STM- S&T
- Matt McKay, STM- Comms
- Stu Design, graphics

Our sponsor: IEEE

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The Band: The Collaborators

Playing its golden hit: *The Open Science Song*

The sound: A Good User Experience,
Trust and Integrity
Shared Infrastructure

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Let’s take a look at the audience

They want diversity;

In hiring, in skillsets, in research topics, in research ethics, in machine learning, in algorithms, in publishing, in content focus

It is a multi-user environment;

Authors, readers, researchers, doctors, practitioners, engineers, citizens, parents, funders, policy makers, a new generation

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Our Open Science Song

- Workflow systems for Open Science
- Open Publishing Platforms
- Peer Review-plus (transform it)
- Reproducibility
- Practical AI (Customer Focus)
- Impact of new content/output types:
  - Preprints
  - Data
  - AI output
  - New library services
  - Google stuff
  - Knowledge graphs
  - Virtual Reality, parallel computational lab tests
  - Living articles versus version-of-records
  - Expert summaries
  - The power of narratives
- Impact Metrics: Beyond the impact factor?
- Metadata
  - Proof of Provenance
  - Author Disambiguation
- Digital Twin

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A Groovy User Experience

- Customer wears many hats
- Know thy user
  - Create a personalised Experience
  - Offer a digital assistant
- Get used to Multiple Users
  - Disconnect buyers and users
  - Authors and readers
  - Scientists and Citizens
  - Who IS the user ?
  - Can she be a machine ?
- Author-based publishing (from journals to article primacy)
- Human-Computer Interface
- Access (open, universal, easy)
- Decentralised Identity (versus authorized identity)
- Accessibility
- Solve fragmentation at the customer side

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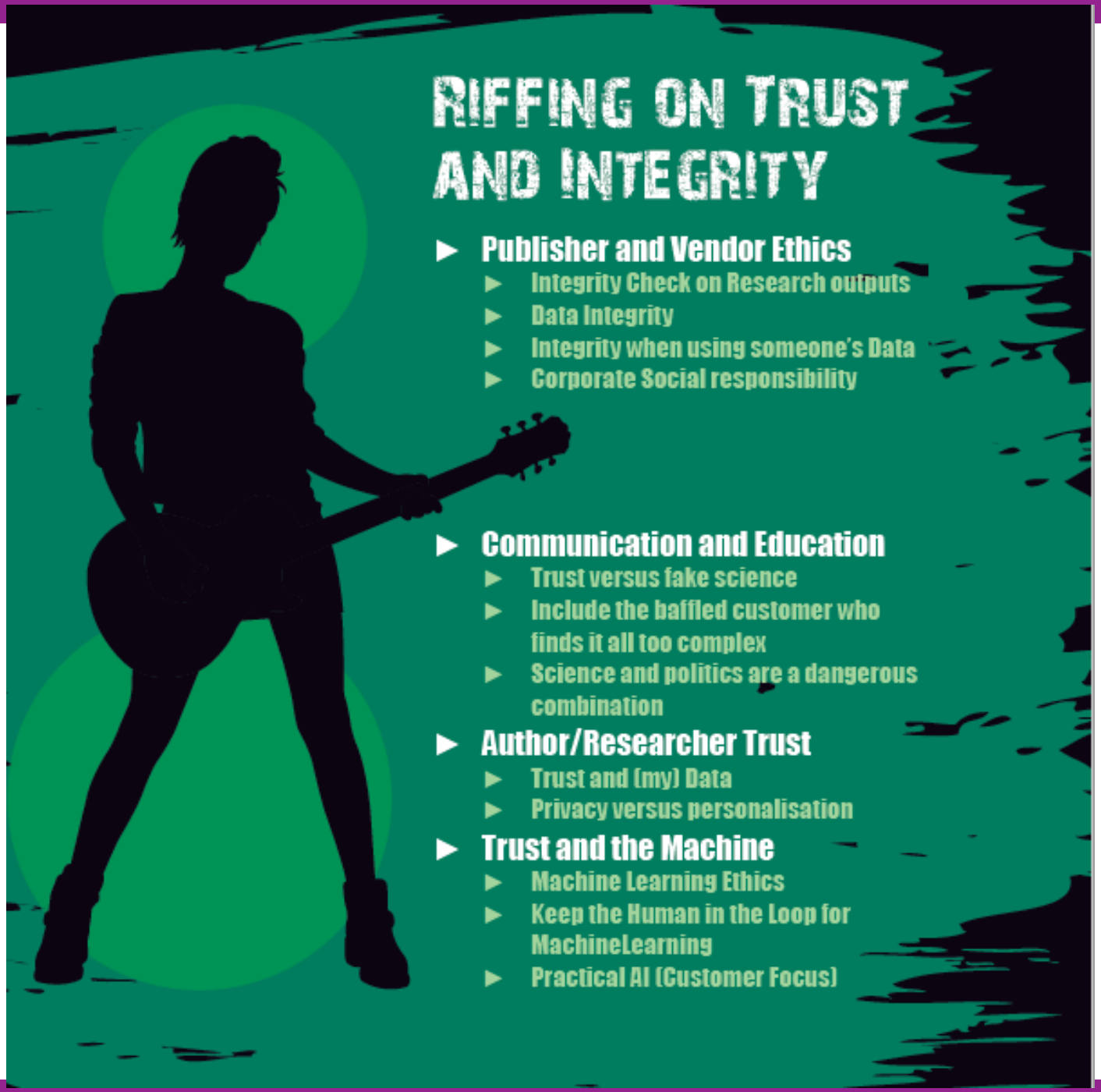

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Audience……ARE YOU READY..??

Then follow this link:

https://www.youtube.com/watch?v=V2fGAHH-TPo&feature=youtu.bekunnje

Stay tuned; soon on a stage near you

- Youtube link: https://www.youtube.com/watch?v=V2fGAHH-TPo&feature=youtu.bekunnje
- Poster available on https://www.stm-assoc.org/standards-technology/tech-trends-2023/
- Recording of round table in podcast:
- https://beyondthebookcast.com/stm-singing-the-open-science-song/
- And sing-along; inhouse presentations can be arranged live or via webinar

Please email: smit@stm-assoc.org

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