

# Interoperability for Historiographical (Research) Data



**#ds4h21 Panel Discussion**

Prof. Dr. Harald Sack  
ds4h21, 30 June 2021

Proposition 1: In order to make sense (and use) of data, we have to **understand** it.

21°



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-21°  
24.000



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-21°  
24.000  
Smolensk

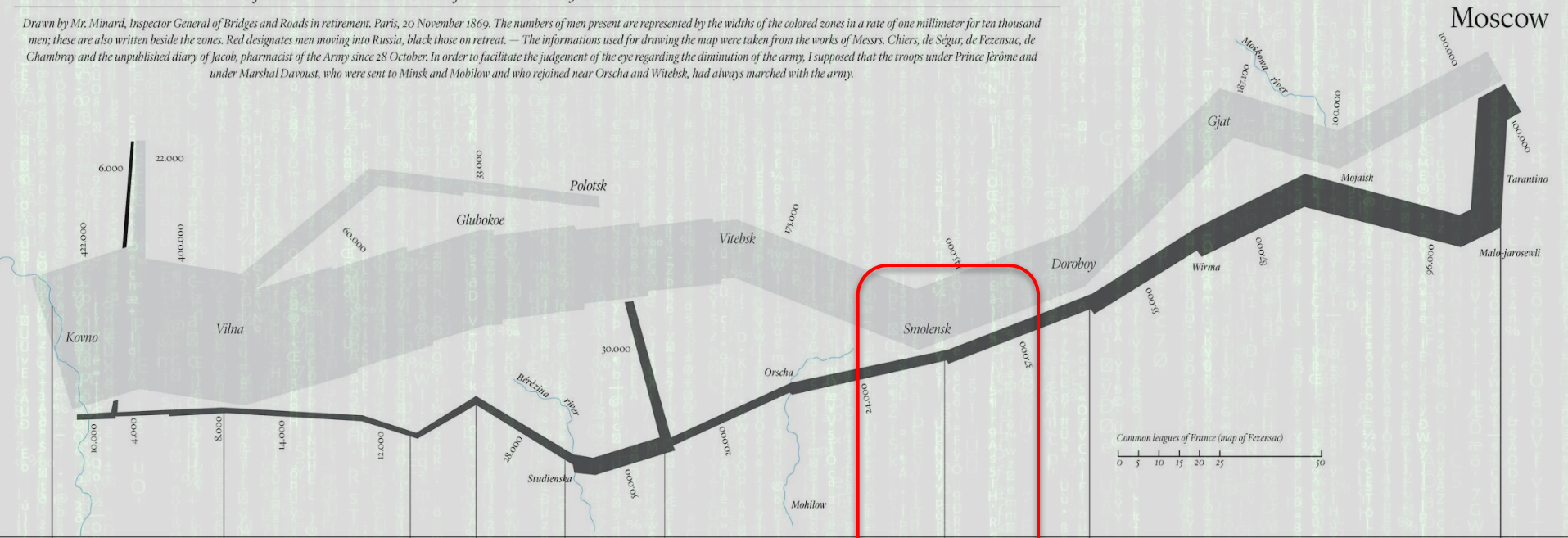
14. November 1812



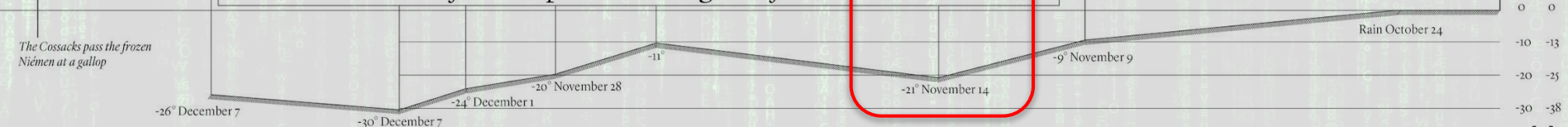
# Proposition 1: In order to make sense (and use) of data, we have to **understand** it.

## FIGURATIVE MAP of the successive losses in men of the French Army in the RUSSIAN CAMPAIGN OF 1812-1813

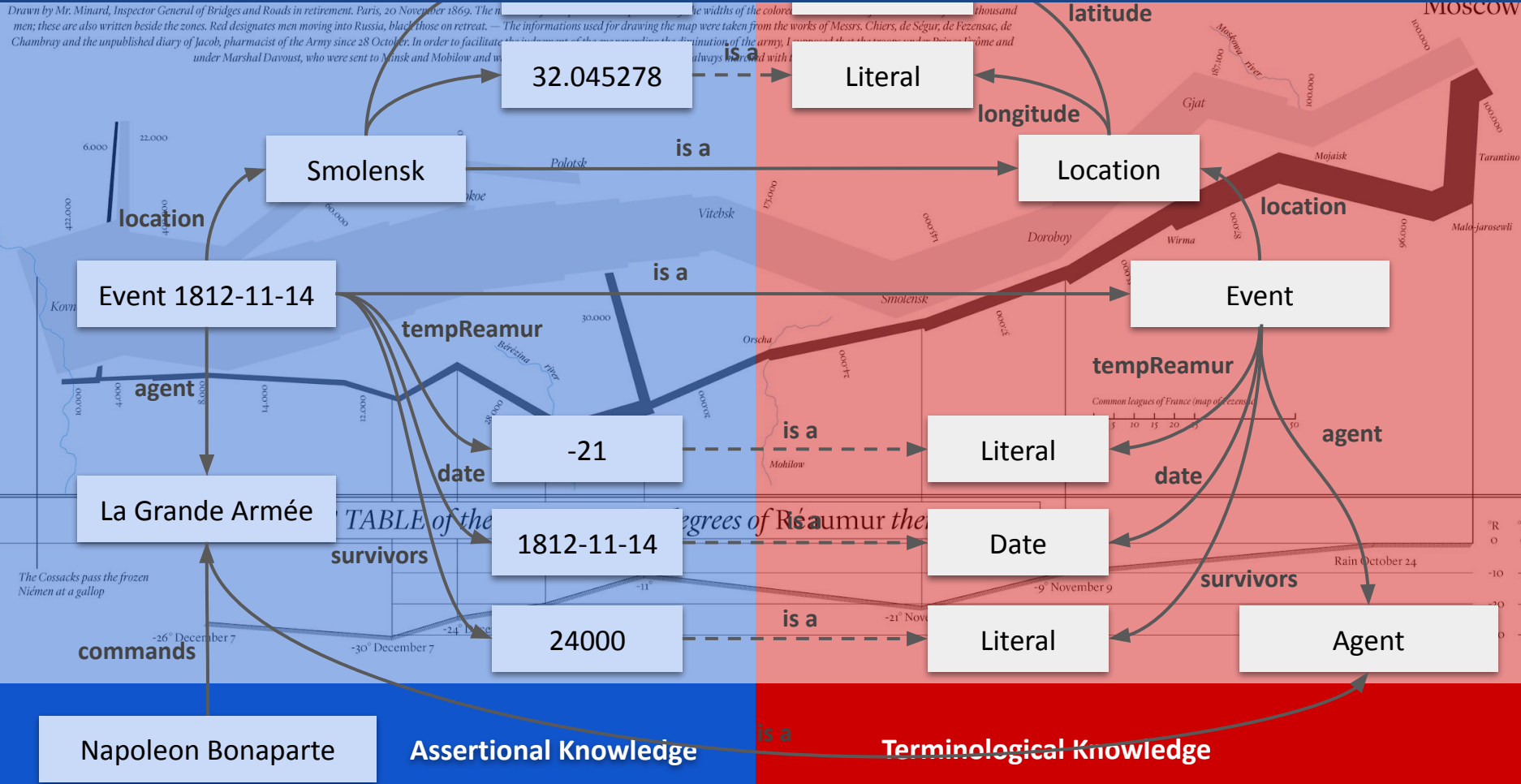
Drawn by Mr. Minard, Inspector General of Bridges and Roads in retirement. Paris, 20 November 1869. The numbers of men present are represented by the widths of the colored zones in a rate of one millimeter for ten thousand men; these are also written beside the zones. Red designates men moving into Russia, black those on retreat. — The informations used for drawing the map were taken from the works of Messrs. Chiers, de Ségur, de Pezencas, de Chambray and the unpublished diary of Jacob, pharmacist of the Army since 28 October. In order to facilitate the judgement of the eye regarding the diminution of the army, I supposed that the troops under Prince Jérôme and under Marshal Davoust, who were sent to Minsk and Mohilow and who rejoined near Orscha and Witebsk, had always marched with the army.



## GRAPHIC TABLE of the temperature in degrees of Réaumur thermometer



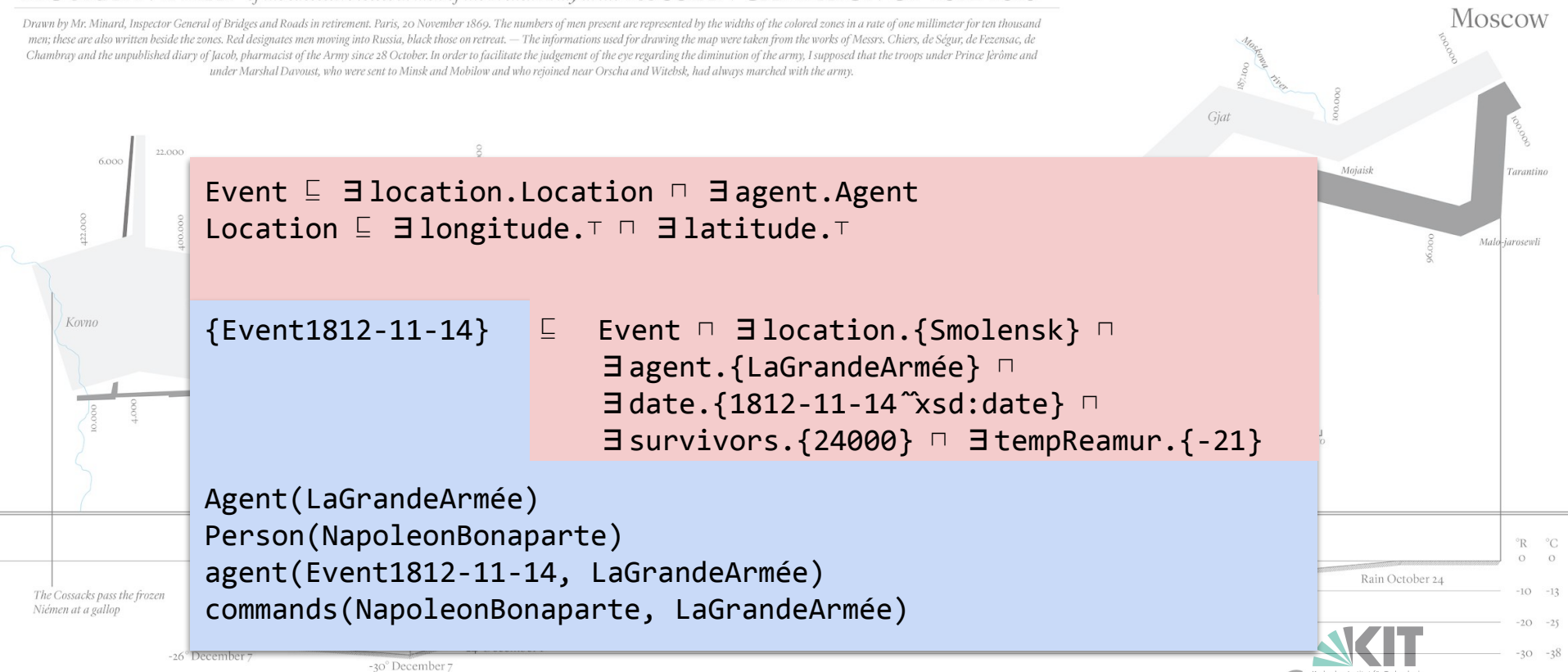
# Proposition 2: Instead of extensive data descriptions make use of **explicit semantics**.



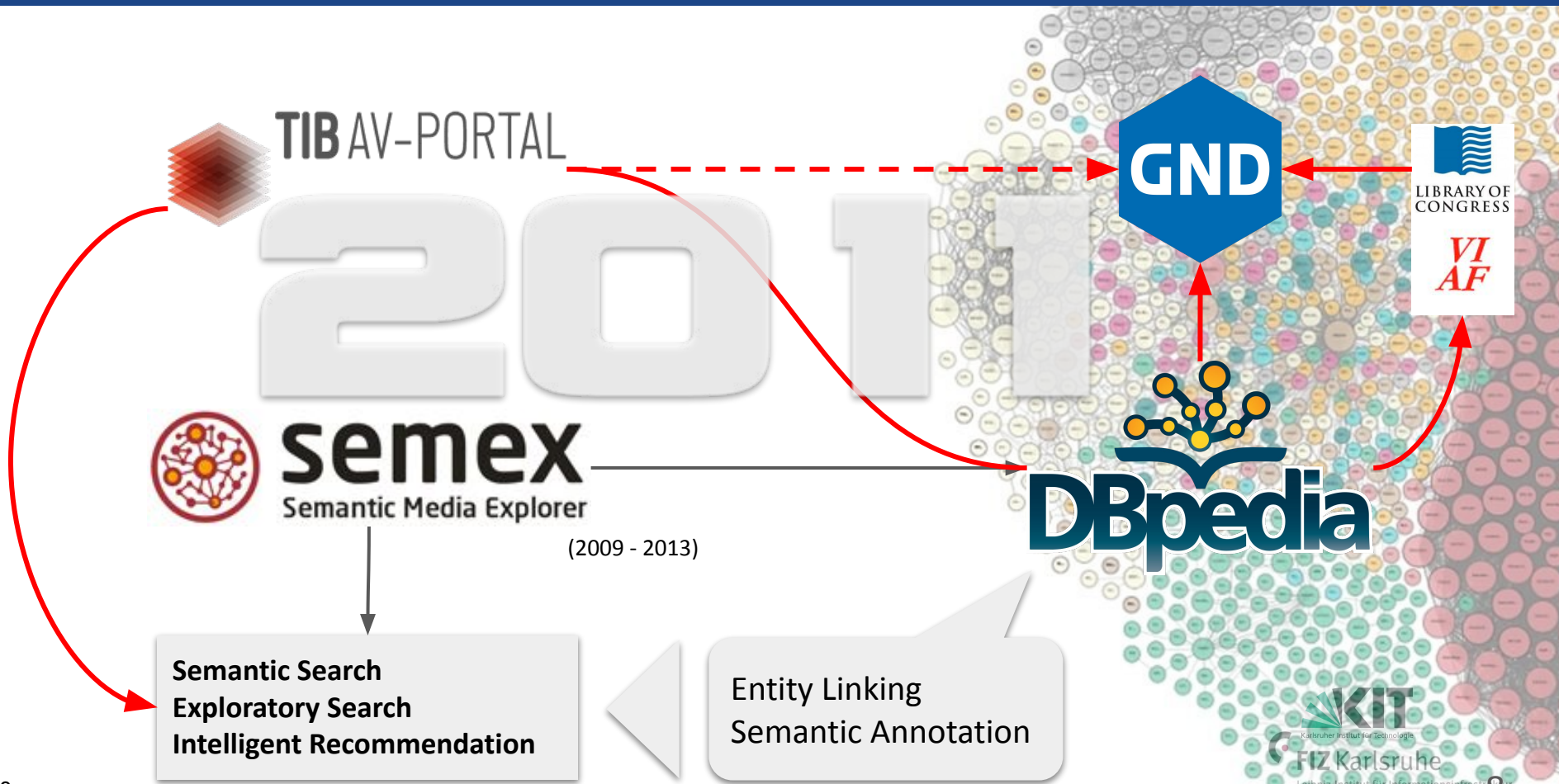
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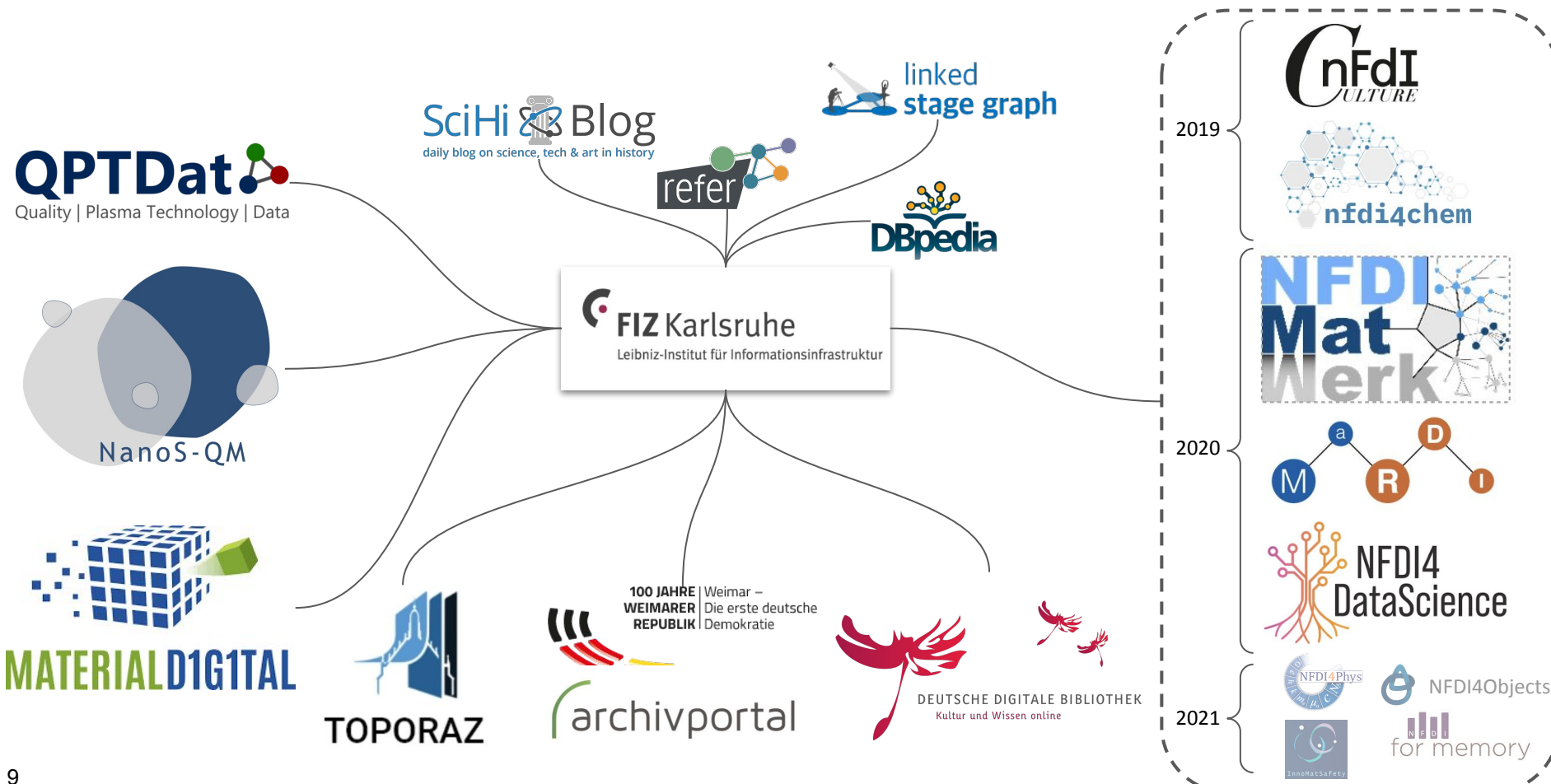


# Proposition 3: Semantically annotated data enables (automated) interoperability.





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Proposition 4: Today, most research data **lack** (besides others) **interoperability**.



# Research Data Silos



Proposition 5: NFDI is a **first step towards research data interoperability.**

The logo for NFDI, consisting of the lowercase letters 'nfdi' in a dark blue, sans-serif font. A small green dot is positioned above the 'i', and a small blue dot is positioned to the left of the 'n'.

nfdi

The background of the slide features a world map in a light blue color, overlaid with a complex network of dark blue lines and circular nodes, representing global connectivity and data exchange.

# Networked FAIR Research Data Research Data





#### Image References:

[1] Matrix Computer Screen, pixabay license <https://pixabay.com/illustrations/matrix-code-computer-pc-data-356024/>

[2] Charles Minard's 1869 chart showing the number of men in Napoleon's 1812 Russian campaign army, public domain, <https://commons.wikimedia.org/wiki/File:Minard.png>

[3] Silos, CC0, <https://pxhere.com/en/photo/773866>

[4] Globale Digitalisierung, public domain, <https://www.publicdomainpictures.net/pictures/380000/velka/globale-digitalisierung-201105.jpg>

# Thank you very much for your attention!

**Prof. Dr. Harald Sack**

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