Research through the eye of technology

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Defining Technology

According to Wikipedia, technology is a body of knowledge used to create tools, develop skills, and extract or collect materials.

Source: Wikipedia

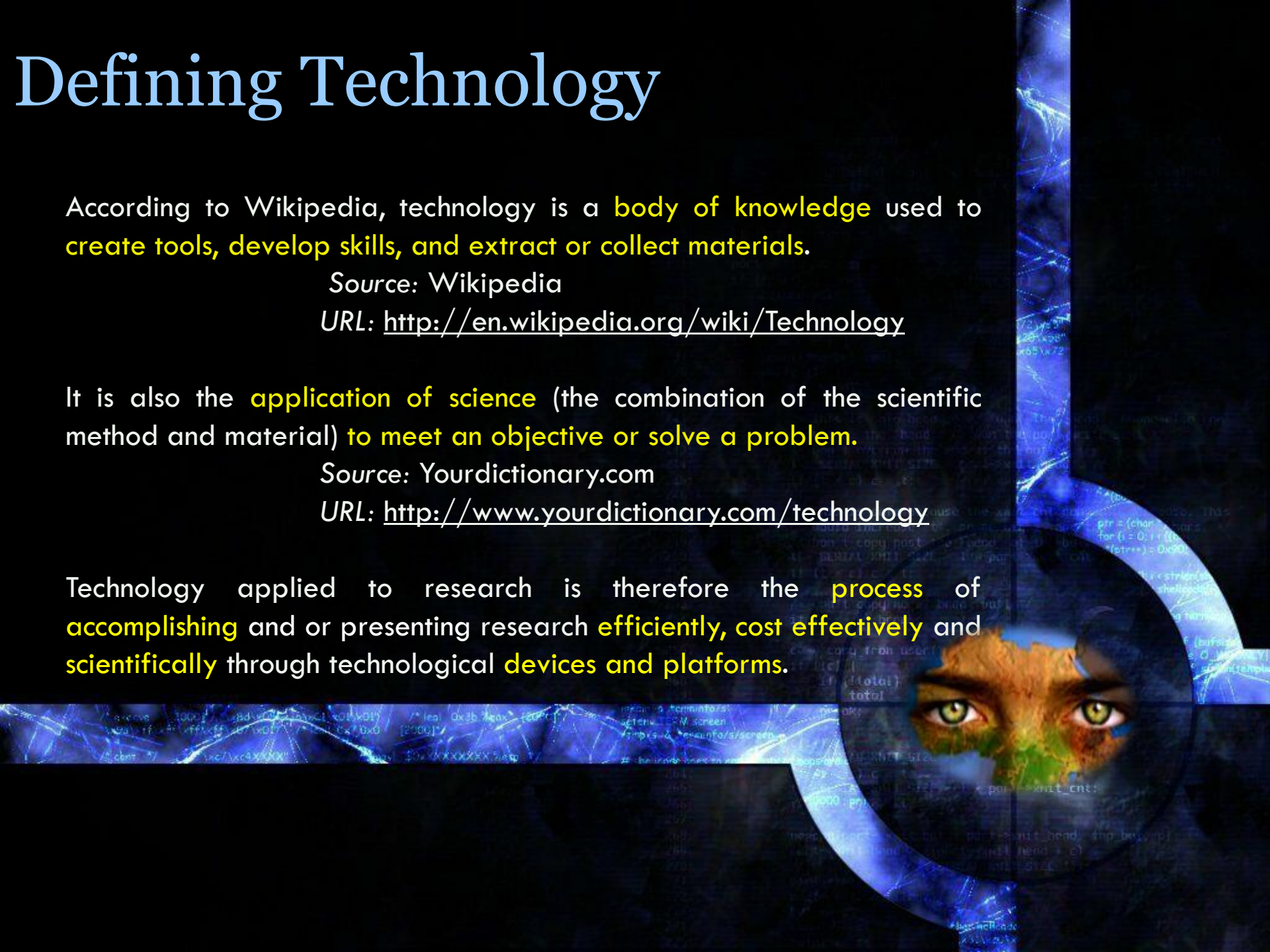
URL: http://en.wikipedia.org/wiki/Technology

It is also the application of science (the combination of the scientific method and material) to meet an objective or solve a problem.

Source: Yourdictionary.com

URL: http://www.yourdictionary.com/technology

Technology applied to research is therefore the process of accomplishing and or presenting research efficiently, cost effectively and scientifically through technological devices and platforms.

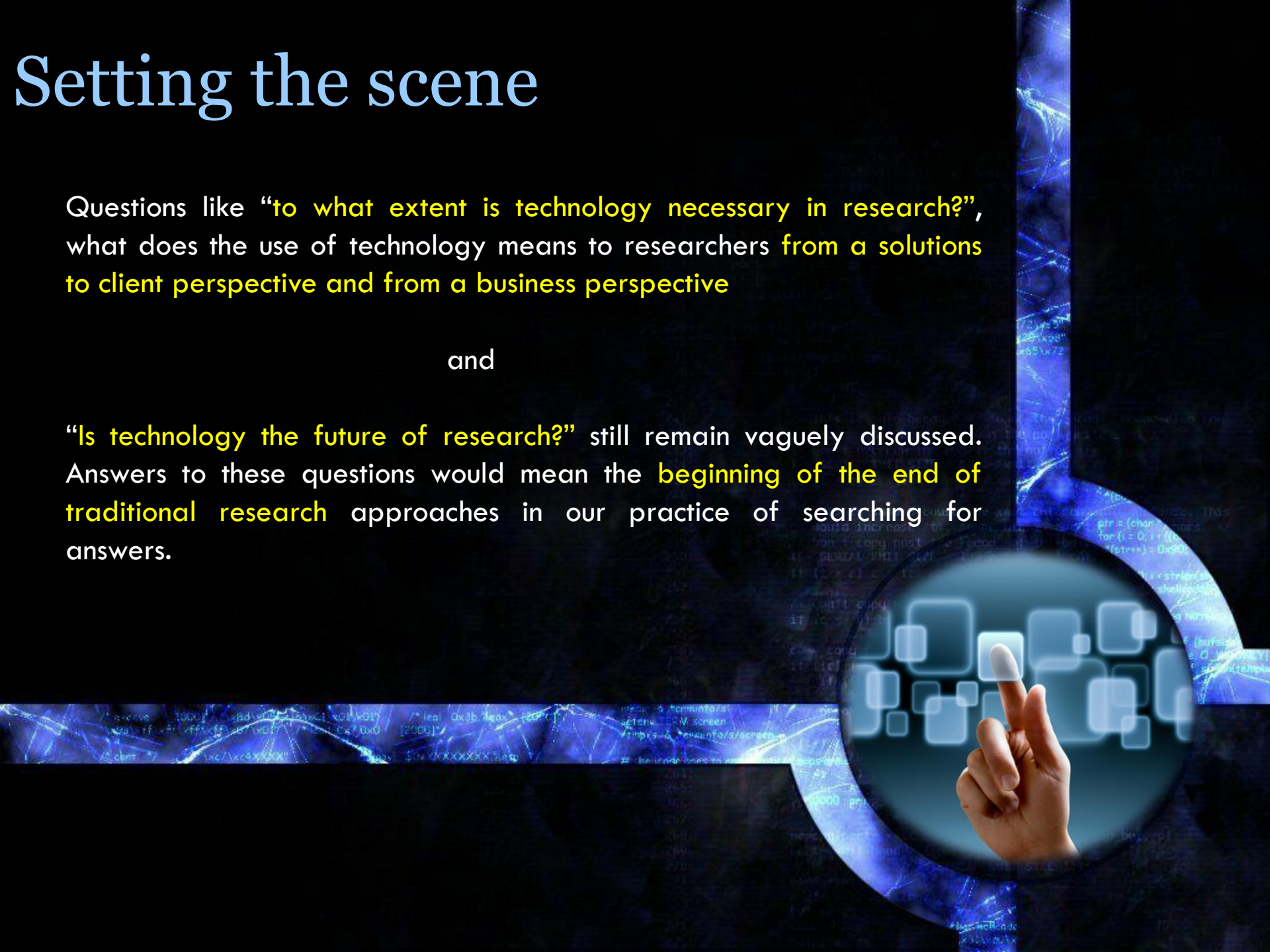


Setting the scene

Questions like "to what extent is technology necessary in research?", what does the use of technology means to researchers from a solutions to client perspective and from a business perspective

and

"Is technology the future of research?" still remain vaguely discussed. Answers to these questions would mean the beginning of the end of traditional research approaches in our practice of searching for answers.



The hypothesis of the research

Hypothesis

Technology is absolutely necessary in research and with it comes great opportunities that would revolutionalize the research industry as well as bring unfathomed challenges like never experiences before

The scope of the research

Being a vast subject of discussion, our focus is to explore the application of technology in research throughout critical stages of a typical research process and how that affects positively or negatively the noble practice of research. The three main critical stages of research are therefore:

- ✓Research set-up,
- ✓Data collection and
- ✓Analysis and reporting

The objective of the research

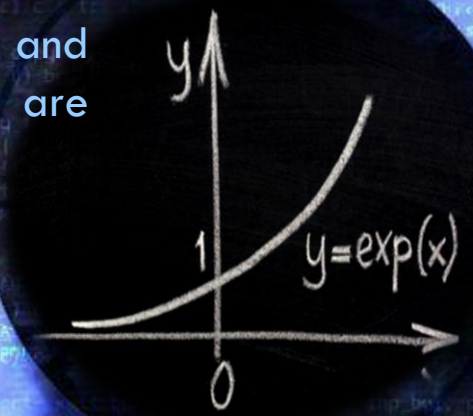
- ✓Uncover the progress (current status), the opportunities and the challenges that the application of technology in research brings
- ✓Discuss what the application of technology in research means to researchers as well as the future of research.

Research methodology

Desk research

Stakeholder (practitioners in IT, Data processing and analysis) consultations.

Findings triangulated with what other leading experts and practitioners (Qualtrics, Facebook, Google and ESOMAR) are saying. The research took a week to accomplish.



The findings

Technology in research set-up and design

The good

The bad

Costly to hire and maintain.

Multi-D team

Increasing need for multidisciplinary teams offering Synergistic expertise in design of structural, statistical and mechanical systems necessary in providing a multi-dimensional approach to research.

Technology in research data collection

The good

New and highly interactive data collection techniques such as CAPI, CAWI, CATI, CAQDAS, Netnography etc, that enable advanced simulation and visualisation of research data.

The bad

High initial cost of purchasing devices and maintaining their operational platforms

"Cloud-based software … such as Qualtrics… with more than 5,000 organizations…worldwide and Survey Monkey, changing the way researchers collect and analyse data."

Qualtrics

Technology in research data analysis and reporting

The good

The bad

Decline in critical thinking and analytical skills [1]

Highly interactive analytical software with inbuilt data visualization and statistical applications with formulae for testing significance, viability, identifying patterns and segments

[1] *Patricia Greenfield, professor of psychology, University of California - Los Angeles*

Other impacts of technology in research - [The good]

- Speed of data collection and analysis (e.g. opinion questions during live TV news broadcasting).
- Reduced field logistical costs.
- Accuracy of data collection (GPS)
- Improved analysis through visualization.
- Frequent interaction with the public o social media research platforms.

Other impacts of technology in research - [The bad]

- Business losses and closures with the introduction of EDCD, GPS apps in smart phones.
- Down sizing or removal of whole departments of data capture with the introduction of EDCD
- Redundancies and job losses.
- Cyber criminals using online identification and tracking technologies to monitor individuals online without their knowledge

What are the implications?

What this implies – [Implementation]

As much as traditional thinking is the foundation of though to problems, technology applied has provided a platform for inventive, practical and cost-effective solution to complex problem facing researchers. How we learn and how implement the new techniques is key.

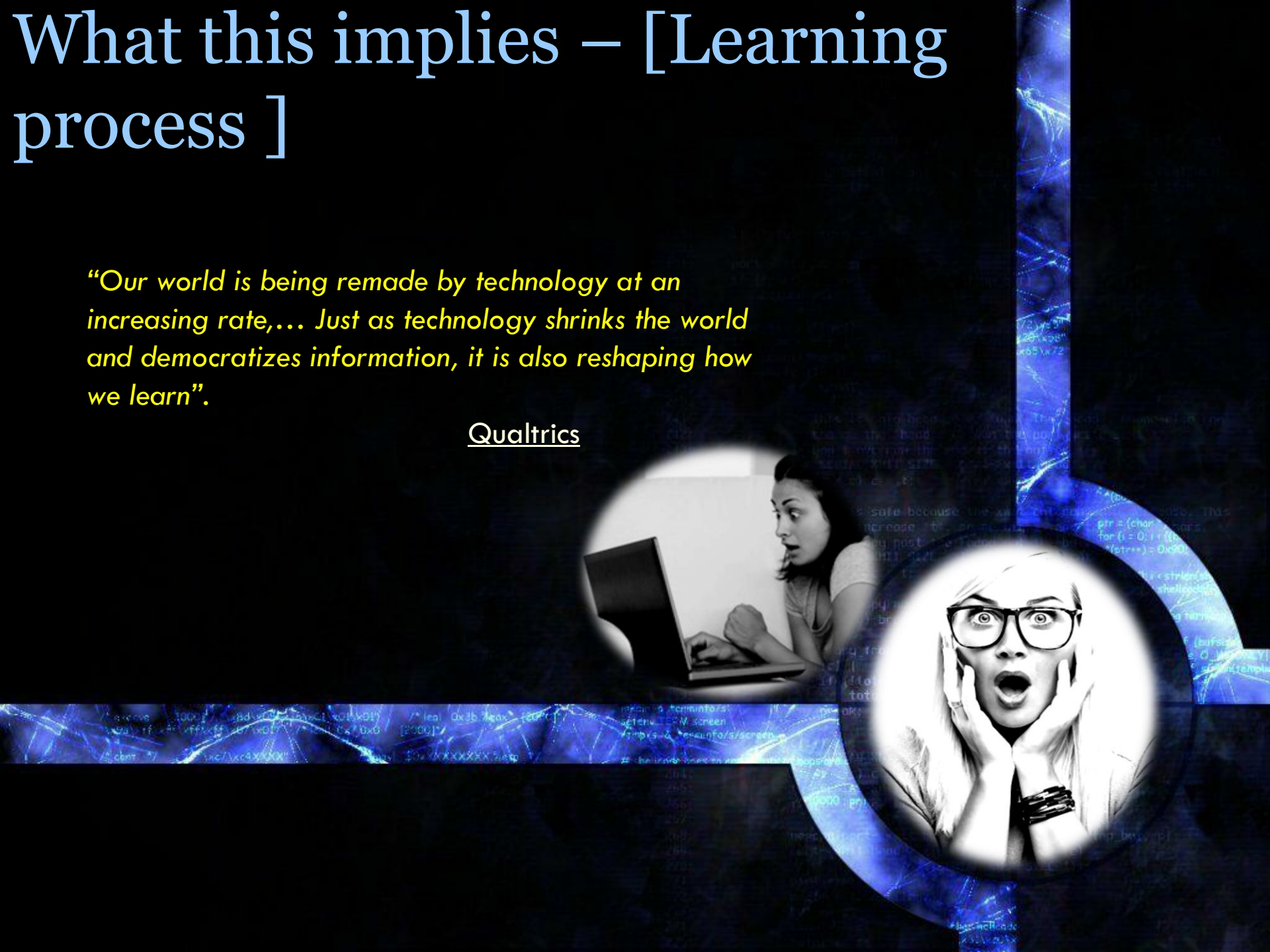
"One of the most important things that we do is to … re-examining traditional approaches in the light of the most up-to-date knowledge and technologies"

-Michael Willford, Arup

What this implies – [Learning process]

"Our world is being remade by technology at an increasing rate,… Just as technology shrinks the world and democratizes information, it is also reshaping how we learn".

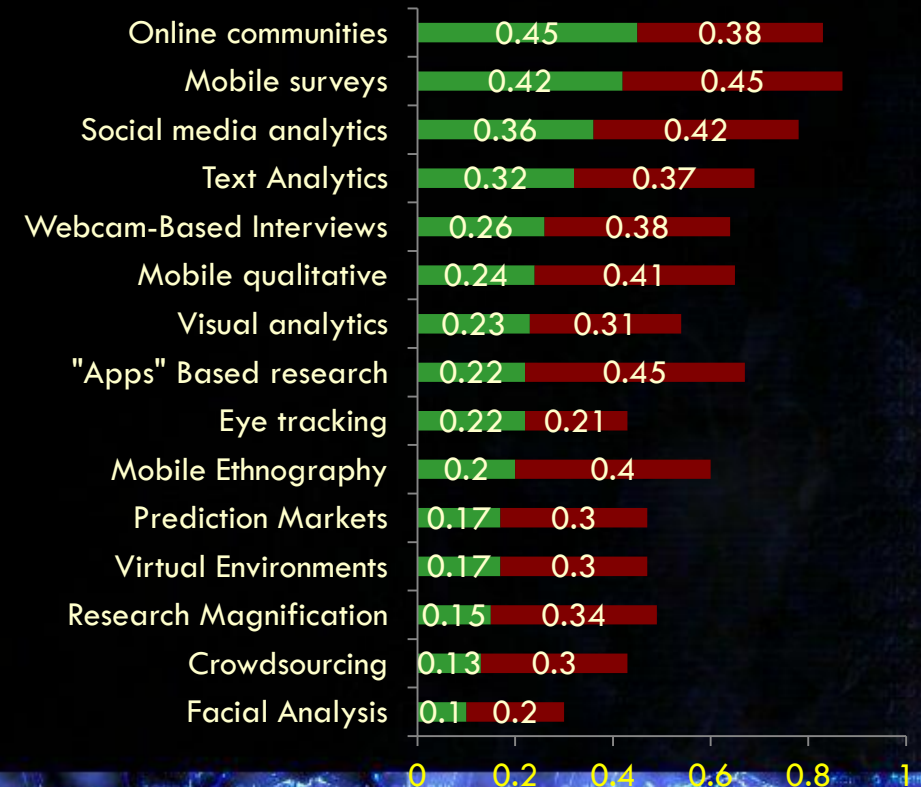
Qualtrics



What is the future?

What is the future?-[Observed trends]

Emerging technologies



Source: ESOMAR's 2013 industry trend report

Emerging forms of analysis that rely on visual and audio data likely to encourage analysts to examine aspects of which were hard to record and use as evidence before.

What is the future?-[alignment]

Digital convergence in research techniques where a range of new technological approaches less bound by traditional thinking gain acceptance.

There is an evident restructuring and repositioning of research organizations in line with available technologies and expertise.

It is therefore absolutely essential for research practitioners to adapt and thrive.

Conclusion and recommendation

How we adapt and measure-up requires an audit of our research processes in terms of the people (workforce) the systems (tools and platforms) and the organization (how our agencies are structured towards delivering our promise)

As much of the future of technology relies upon research, the future of research will rely on technology.


“Research through the eye of technology”
The end