The Future of Exhibit-Evaluation is digital

Presenting a framework of visitor studies with a special focus on tracking & timing

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The Role of Evaluation/visitor studies for Exhibitions

Over the last 20 years, in tourism exhibitions became increasingly popular. Investments of several million Euros are no exception. What is astonishing is that despite such large sums of money, there is hardly any control of what happens to the visitor. Exhibition plans are usually not based on thorough data regarding the pre-knowledge, images, prejudices or naive notions visitors bring with them.

To support

- the quality management (educational/interpretive role; service issues),
- the marketing and
- the legitimation

of a given site, visitor studies need to be an integral part, instead of an appendix of exhibition planning, implementation and control. It is not enough to ask for zip – codes at the ticket counter, offer a guest-book, or allow university students to do an occasional, empirical study. Also, visitor studies comprise other issues than marketing research. We need to be able to show evidence of what happens to the visitor, of what he or she takes away as an emotional, cognitive, attitudinal or other outcome (Fig. 2). Simply counting heads will not do this job in the future—besides, there are quite some differences when it comes to the ways, visitor numbers are counted.

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Fig. 1. Museums are visited by a constantly increasing number of guests each year (© Wohlers)

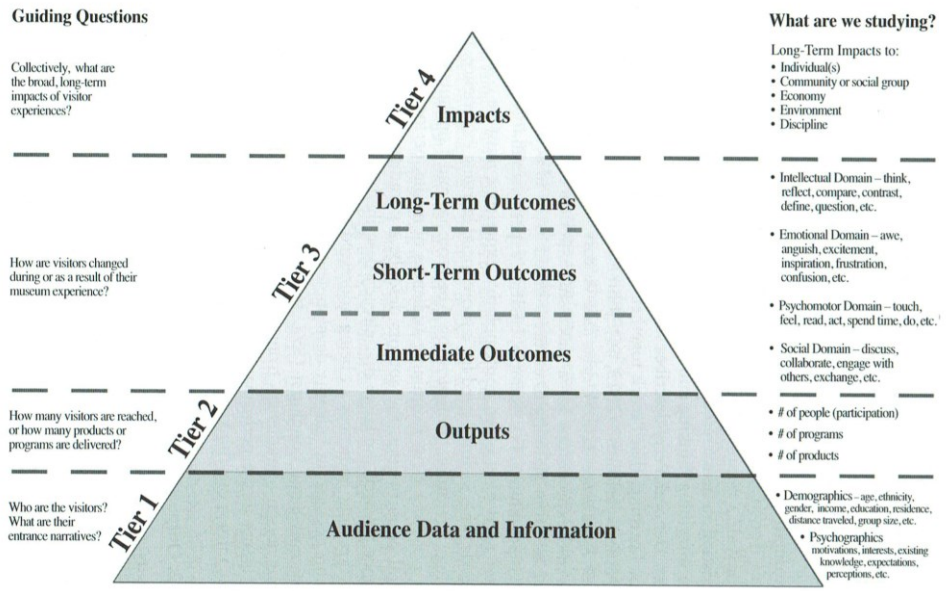

Fig. 2. Outcomes Hierarchy (Wells, Butler, and Koke, 2013)

Why visitor studies do not happen

There are certainly various reasons, why there is not more evaluation, despite the benefits that we can expect to get from such regular studies. (Binks and Uzzlle, 1990) compiled these obstacles as follows:

- Lack of Interest in Evaluation on a political level
- Unprofessional evaluation techniques
- Reluctance, inactivity and low interest on the side of the staff
- Lack of clearly phrased goals
- Lack of trust and knowledge of change processes
- Lack of funding for evaluation and potential improvement

Now, what can we do about such challenges, which are not always the same for every site, but which might help to analyse a particular situation? It is suggested, that using modern digital technologies helps to reduce and partially overcome such challenges.

Digital options for visitor studies

The advantage of using digital tools are obvious, they are simple, effective, and efficient. Nevertheless, from our experience, even interviews are rarely conducted on a regular level by the majority of sites, although there are already quite a few, sometimes even free digital interview tools available online.

For various purposes lots and lots of evaluation instruments from the field of online marketing are available for even small budgets. Conducting target group or sentiment analyses, gathering ideas for new and feedback for existing exhibitions are just a few, quick examples of what the online world can help us with. (It is astonishing that so far exhibitions are often managed with hardly any structured visitor feedback, while at the same time since years the world is in uproar because of facebook, NSA, google, etc. are collecting literally ALL data available on this planet, legally and illegally, in order to improve their systems [and influence].)

Another easily available source of data are logfile analyses from the increasingly used interactive touch-screens, -tables and other digital installations. Again it´s astonishing that such rich and easily available sources of data to evaluate and potentially improve exhibitions are not used.

While this list is not claiming to be complete, I would like to give a short review regarding a new and innovative digital instrument for the observation of exhibition visitors. While there have been various ways of approaching the evaluation concept of tracking & timing (t&t), so far there was no satisfying technique (table 1). In this context we developed a new tool.

Method	Important advantages	Important limitations
Paper-and-pencil	• Basic methodology is relatively easy to learn • Relevant variables can be easily included (e.g., certain indicators for behavior) • Flexible method, adaptable to different research foci • No costly equipment required	• Trained researchers are needed, especially if many variables will be collected at the same time (interrater reliability) • The presence of the observer might be noticed by the visitors • Costly one-by-one tracking (many research hours for large data sets) • Data transfer from observation sheets into analysis software is needed
Handheld PCs	• Same as paper-and-pencil method except for the last bullet • Offered category lists make it easier to record several variables at the same time • Easy data transfer into digital analysis software	• Same as paper-and-pencil method except for the last bullet • Initial asset costs • Initial training for handling the devices and the software
Videotaping	• Possibility to re-watch visitor movement and behavior • No observer needs to follow the visitors	• Costly one-by-one tracking (many research hours for large data sets) • Mostly limited in the observed area (range of the camera) • Initial asset costs and training
Automated systems	• Automatic collection of spatial and temporal information can ensure standardized data collection • No observer needs to follow the visitors • Large data sets can be recorded in shorter times (several visitors can be tracked at the same time) • Easy data transfer into digital analysis software	• Initial asset costs • Initial training for set-up of the system and for handling the devices and the software • In general no additional variables, such as indicators for behavior, can be recorded – little flexibility

Table 1: Summary of the advantages and limitations of different timing and tracking methods (Schautz et al., 2016)

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Introducing a new visitor observation tool

Having conducted quite a few visitor studies over the last 20 years we were always confronted with the fact, that no exhibition would be further evaluated after we had finished our task. Maybe during another exhibition project, when the funding organisation (foundation or public body) would ask for “some sort of” evaluation.

As outlined above there are already instruments for effectively and efficiently gathering data from visitors via online surveys and/or through digital media tools. What we developed over the last 10yrs. is an online program, which allows

- to upload the floor-plan of a given exhibit,
- quickly define those spots, objects, etc. that are supposed to be evaluated and
- add site-specific demographic data entries.

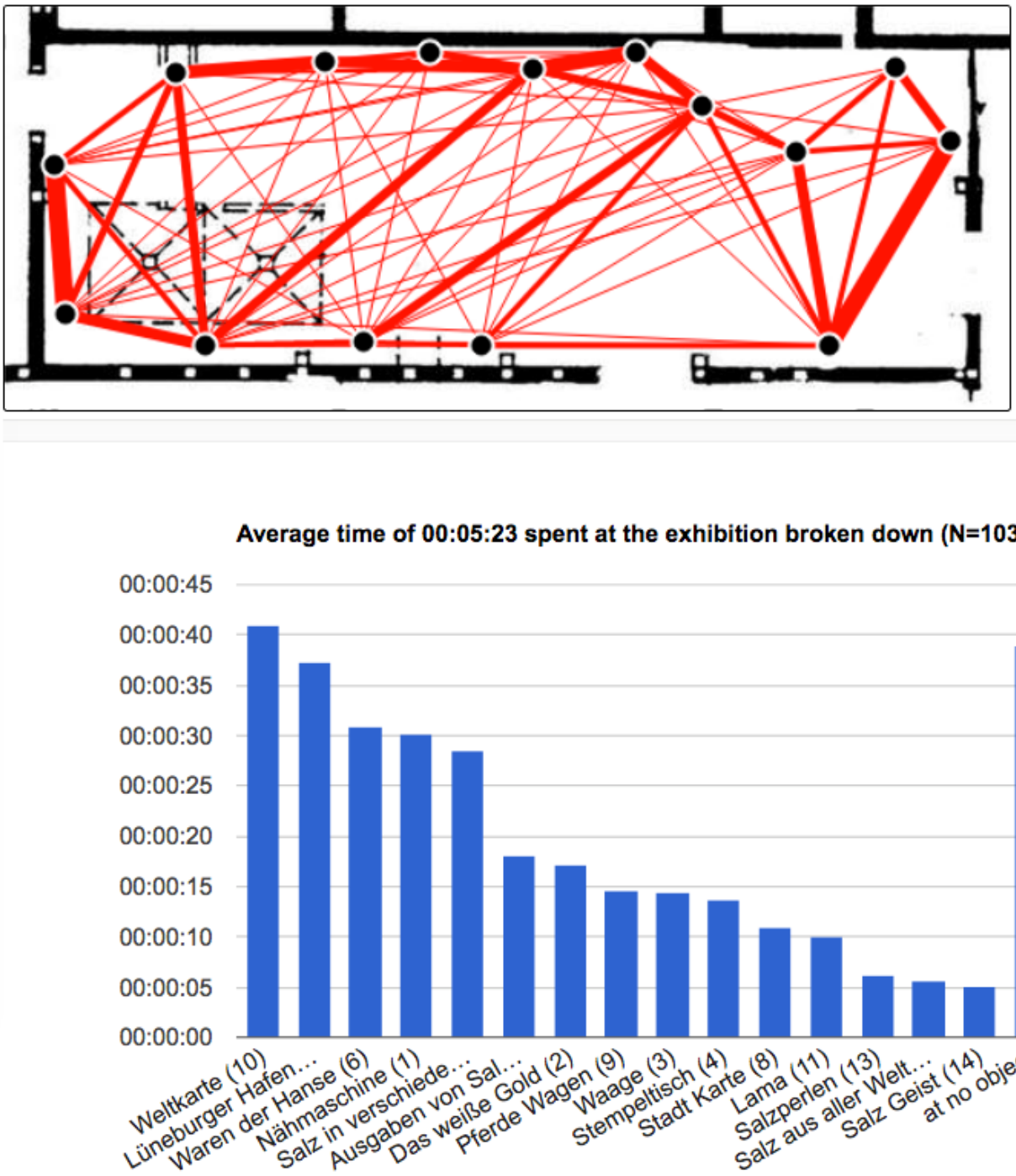

Fig. 3. Examples of automatically generated results from the new observation tool

Visitors are followed around and by simply clicking on the objects in question tracking and timing data are gathered and automatically processed for the exhibition (for some exemplary results see Fig. 3). Additionally, data about specified behavioural patterns can be collected and qualitative comments entered. Evaluating real behaviour is crucial when it comes to thoroughly assessing a particular exhibition. It has been proven that *fully*-automated data-collection, e.g. via RFID or beacon cannot provide a site with the data necessary for assessing it as needed (Schautz et al., 2016).

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