



PhD in DESIGN - 39th cycle

PNRR 118 PA Research Field: UNVEILING DIGITAL INFRASTRUCTURES: ENTANGLING SOCIAL HISTORY AND DESIGN FOR SCIENCE MUSEUMS AND PUBLIC INSTITUTIONS

Monthly net income of PhDscholarship (max 36 months)

€ 1195.5

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

Motivation and objectives of the research in this field

Today, one of the challenges of communication design, digital media history and museum studies is to make digital infrastructures visible and understandable to an audience made not only of general visitors, but also of scholars, policymakers and stakeholders. Such an achievement needs an interdisciplinary and inter-institutional effort to provide an efficient, transparent and intelligible output, but also an understanding of the role and complexity of PAs that guarantee the organization and quality of infrastructures. In sum, in-depth research from a design, historical and museum studies point of view is needed to make infrastructures not only more visible, but more reliable and “meaningful” to different social groups.

This project has a threefold goal:

1. To investigate and reconstruct from a historical perspective the role of public digital communication infrastructures, with a focus on digital research networks. Examples include the Italian National Computer Network for Universities and Research (GARR), the Consortium for Automated Calculation of North-Eastern Italy (CINECA) or prospective developments like Terabit, the scientific research data “highway” devised by the ICSC. These large IT projects play an essential role in providing advanced digital services to the scientific community in Italy.
2. To co-design with the public administration a set of best practices of social and cultural promotion in science museums, scientific institutions and media, aimed at



	<p>different publics, to foster an inclusive reflection on the relevance of digital computing and communication infrastructures, by enquiring their present, history, and public role. This aim is strongly supported by the role of the museum institution as a public history catalyzer.</p> <p>3. To put in dialogue three key public institutions in the Italian context: the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci of Milan (MUST), the Politecnico di Milano (Polimi), addressing a public or public/private institution offering critical digital services and infrastructures for research.</p> <p>The threefold goal of the project would contribute to the valorisation of the resources and materials that are stored but not studied in such institutions, and in turn on the empowerment of public administration. In particular, the project meets the call criteria (see art. 9, p.1) as it pursues the “innovative strategies strongly oriented towards users and the effectiveness of the actions implemented, as well as the valorisation of resources”. The valorisation of the archival and historical resources stored, or to be discovered, at the MUST and public digital service institutions is a key contribution of the project to the PA sector. The project will also strengthen ongoing collaborations between POLIMI and MUST.</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>The research will be grounded in qualitative methods coming from the traditions of the fields of sociology, Science and Technology Studies and social history. In particular, the candidate should carry out the research by mixing three qualitative methods: Field ethnographic work (e.g., participant observation and/or shadowing in the PA); archival materials studies and analysis (from the MUST and from other public institutions); and oral history interviews with key informants. The methods listed above will provide the researcher with the essential data for an in-depth analysis of the history as much as the understanding of the organizational, material, and social conditions lying behind the construction of public digital infrastructures. As soon as the historical research is completed, the PhD student, supported by her/his supervisors, will elaborate a co-design strategy to display</p>



	<p>and communicate the history and the role of public research infrastructures in a science museum context. In this way, the PhD will co-design a communication strategy apt at promoting the materials and the institutional mission of PAs, and also provide public administrations with a coherent organization of the materials and data available in the accessed archived. The international experience in two European departments (at the University of Luxembourg and USI - Università della Svizzera italiana) interested both in the history of public digital infrastructures, and in the design and organization of digital media archival collections, will provide the PhD with a strategic theoretical and empirical knowledge to achieve the goals of the project.</p>
Educational objectives	<p>The educational objectives are:</p> <ul style="list-style-type: none"> · From a theoretical perspective, the researcher will develop merge and profit from the tradition of different disciplines and fields such as Exhibit and Interaction Design, Science & Technology Studies, Media and Communication History, and Museum Studies. Eventually, the researcher will elaborate and interpret the historical relevance of digital infrastructures building her/his solid background grounded in empirical and new case studies. · From an applicative perspective, the researcher will develop skills in the field of archive, collections and exhibit curation and science communication, thanks to the insights coming from exhibit design, communication design and public history. · The researcher will also profit from the inter-institutional and international experience, thus she/he will learn not only how to integrate different disciplinary approaches, but also to weave and put into dialogue the national and European perspectives on the research subject.
Job opportunities	<p>After the PhD, depending on the personal aspirations, the candidate can find employment in the following sectors:</p> <ul style="list-style-type: none"> - Heritage and exhibit curatorship - Public and private programs regarding the dissemination and promotion of digital-based projects. - Academic career in the fields of design, history of media



	and communication, science and technology studies, museum studies.
Composition of the research group	0 Full Professors 1 Associated Professors 1 Assistant Professors 0 PhD Students
Name of the research directors	Paolo Bory; Paolo Volontè; Simona Casonato

Contacts	
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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	597.75 €
By number of months	6

National Operational Program for Research and Innovation	
Company where the candidate will attend the stage (name and brief description)	Museo della Scienza e della Tecnologia Leonardo Da Vinci di Milano
By number of months at the company	6
Institution or company where the candidate will spend the period abroad (name and brief description)	University of Luxembourg (3 Months); USI Università della Svizzera italiana (3 Months)
By number of months abroad	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p>Educational activities (purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences):</p> <p>financial aid per PhD student per year max 4.872,90 euros per student (total for 3 years)</p> <p>Teaching assistanship: availability of funding in recognition of supporting teaching activities by the PhD student there are various forms of financial aid both for research and teaching activities. The</p>



PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.

Computer availability: 1st year, 2nd year and 3rd year: Each research group will supply PhD student with a computer, if necessary.

Desk availability: 1st year, 2nd year and 3rd year: Each research group will supply phd student with a desk.