



EUROPEAN POLICY BRIEF



RICHERS
RENEWAL, INNOVATION AND CHANGE:
HERITAGE AND EUROPEAN SOCIETY

RICHERS “RENEWAL, INNOVATION AND CHANGE: HERITAGE AND EUROPEAN SOCIETY”

The Cultural Heritage Institution: Transformation and Change in a Digital Age

April 2016

INTRODUCTION

RICHERS is a research project funded by the European Commission within the 7th Framework Programme in the domain of Socio-economic Sciences and Humanities. Its main objective is to reduce the distance between people and culture, recalibrating the relationship between heritage professionals and heritage users in order to maximize cultural creativity and ensure that the whole European community can benefit from the social and economic potential of cultural heritage (CH).

RICHERS is about change; about the decentering of culture and CH away from institutional structures towards the individual; about the questions which the advent of digital technologies are demanding that we ask and answer in relation to how we understand, collect and make available Europe's CH. As digital technologies now permeate all of society, compelling us to rethink how we do everything, RICHES asks the question: how can cultural heritage institutions renew and remake themselves? The ways in which CH is engaged with, understood, communicated, participated in and disseminated has been transformed through the use of digital technology (DT). CH institutions, as social institutions, have faced, and are facing, enormous challenges in redefining their role, in adopting new working practices and new ways of engaging with CH visitors. As DT continues to evolve, the CH visitors' expectations also evolves and the CH institution needs the resources to keep up with these rapid developments to remain relevant for existing audiences, to attract a new generation of visitors and to continue to contribute to Europe's creative economy.

This policy brief is concerned with CH institutions in a time of dynamic cultural, social and technological change. Specifically, it considers the multi-faceted impact of DT and the recalibration of the relationship between institutional CH practices and the individual. It advocates that innovation through research and new technologies are essential for bringing the CH of Europe

closer to people¹, the importance of the CH sector to European growth and the recognition of DT as a driver of change in the CH institution.

The research undertaken indicates that the development and implementation of emerging, innovative technologies can have many benefits for the CH institution and the CH visitor but it can also be disruptive, challenging and limiting. Based on RICHES research into best practice in CH and DT, key observations have been drawn and this policy brief outlines some of the benefits and constraints involved which can be used as guidelines for European policy-makers at strategic and practical levels.

EVIDENCE AND ANALYSIS

THE CHANGING DYNAMIC OF CULTURAL HERITAGE INSTITUTIONS

Challenges and Changes: In the last three decades the CH institution has faced many challenges and changes including shifts in practice from its custodial role in relation to collections and conservation to becoming a social and sometimes commercial institution and part of what has been termed the 'creative industries'. In his book *The New Museology* (1989), Peter Vergo asked the question "What is museology?" (Vergo 1989: 1). He claimed that there was "a state of widespread dissatisfaction with the 'old' museology both within and outside the museum profession" (Vergo 1989: 3). In addressing the change in museums in the 1980s, he declared that the "Museum is said to be undergoing a 'renaissance'... or as Lumley stated, "it has become a place for visiting exhibitions, eating, studying, conserving and restoring artefacts, listening to music, seeing films, holding discussions, and meeting people" (Lumley 1988:1). In 2007, the International Council of Museums (ICOM), in its revision of the definition of a museum, strengthened the role of the museum as a social institution, "A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment."² DT has brought changes inside the organisation (production), in the CH organisation's communication with the public (distribution), and in the way the public interact with the institution and its contents (consumption). In addition to DT, these changes in policies and practice have been brought about by government policies, from CH professionals and from the CH audience (Black 2005).

Cultural Renaissance: Throughout Europe there has been a drive towards the integration of DT in the CH sector supported by a range of government initiatives and agendas to promote the development and application of innovative technologies in how Europe's CH is accessed, distributed, communicated, preserved and interpreted. This is concomitant with the changes in CH institutions throughout Europe in becoming more interactive, participatory and democratic in their relationship with their visitors and in enhancing their public engagement agendas. The digital has infiltrated and transformed all aspects of social life and the CH institution, as a social institution, is part of these changes. According to Visser (2014), CH institutions have become 'social institutions' with practices that include interaction and co-creation. Relationships between the CH institution and its visitors have been recalibrated: the authority to interpret CH is now shared.³

Participatory Practice: Simon (2010) asserts that DT can foster participation and democratisation in CH institutions. One of the most important principles of participation is "dialogue or creative

¹ *Towards an Integrated Approach to Cultural Heritage for Europe*. European Parliament Resolution of 8 September 2015 (2014/2149(INI), (Item 44). <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2015-0293+0+DOC+XML+V0//EN>

² <http://icom.museum/the-vision/museum-definition/>

³ Keynote speech by J. Visser at the Canadian Museums Association Conference 2014.

<http://themuseumofthefuture.com/2014/04/18/museums-in-times-of-social-and-technological-change/>

expression, shared learning or co-creative work” (Simon 2010: 1). One of the ways in which this has been enabled is through the adoption and implementation of DT in accessing, communicating and disseminating Europe’s CH.

Digital Technologies: The implementation of DT has introduced changes across CH institutions from ticketing, marketing and virtual exhibitions to the use of social media to communicate and network with audiences. It has enabled multi-modal ways of working and has taken CH ‘beyond the label’.



Testing ARtSENSE at The Museo Nacional de Artes Decorativas (MNAD), Valencia, Spain.
Copyright ARtSENSE project

From meeting holograms of historical characters, engaging with virtual and augmented reality, to the use of games (gamification) to communicate culture, these are just some of the examples of innovative and experimental DT that have been implemented in the CH sector. Applications (apps) have been developed for all aspects of accessing, communicating, interpreting and preserving culture with the aim of increasing visitors’ understanding and knowledge of CH. DT can enable diverse audiences to access collections, data about objects and in some cases to contribute to the interpretation of objects, artefacts and archives or exhibition reviews. There is an increasing use of mobile or wearable technology: smartphones, tablets and iPads - a bring your own device approach (BYOD), exemplifying the potential (and predictable) future of DT and mobile internet in accessing information online anywhere, anytime and by anyone. Developments in DT, and the building of appropriate infrastructure by CH institutions, will continue to enable citizens to add their own perspectives and personal knowledge to objects across space and time in a borderless sharing of knowledge. DT has enabled a shift in which the distribution and accessibility of CH has become available through various multi-platform channels (online, offline, mobile) and this has entailed new thinking by CH professionals in the presentation of content, not just in increasing the quantity available, but also in qualitative ways in order to meet the needs of audiences and in developing and sustaining new dialogical relationships (Doyle 2015). These developments underline the continuous need to improve the level of digitisation, preservation and online availability of CH.⁴

The CH Audience: The value of the CH sector lies in the quality and diversity of collections, objects, monuments and places. But value is also in how they are accessed, communicated, preserved and disseminated and experienced by society who may be changed and transformed by them. Collections are at the heart of CH institutions and are their main capital. Digital technologies have had an enormous impact in enabling wider access to collections, in developing innovative and engaging teaching and learning, and in telling stories of their collections in innovative and

⁴ *Towards an Integrated Approach to Cultural Heritage for Europe*, European Parliament Resolution of 8 September 2015 (2014/2149(INI), (Item 47). <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2015-0293+0+DOC+XML+V0//EN>

interactive ways. CH collections are now both physical and digital and audiences are more diverse; they are virtual and real, and they are global.⁵ The adoption of DT can help CH institutions to reach audiences who are too remote or unable to access the physical space of the museum.⁶ CH institutions are in the business of communicating culture but this communication is no longer in the sole control of the institution – rather it has become interactive, participatory and dialogic. Individuals can now choose how and what to access according to their own, personal preferences. Some audiences are digitally literate but others are not, or may prefer not to engage with DT, and the CH institution has to cater for this diversity.

Collaborative Partnerships: The development of innovative technologies can be time-consuming and expensive. The research undertaken in RICHES indicates that some of the most successful projects in developing DT are through collaborative, interdisciplinary working, particularly with academic institutions. Working in partnership is not new in the CH sector and it is long recognised that this can generate a body of knowledge that can be a vital resource for the CH institution. By developing partnerships with external bodies such as university research departments and technology companies, the CH institution can access innovative technologies and academic research, thereby enhancing the CH visitor experience and potentially contributing to the transformation of how European CH is accessed, communicated, interpreted and disseminated. Working in interdisciplinary teams can have many benefits for all partners such as sharing knowledge and experience, but it is also challenging and it is important for the CH institution and the academic research institution to be aware of each other's needs and requirements such as:

- Financial and time constraints
- Input from all partners should be valued equally with respect and trust in achieving aims and objectives and be open to new ideas and learn from different perspectives
- Awareness and knowledge of copyright and ownership issues when working in partnership

*Interoperability*⁷: Collaborative partnerships are a form of interoperability and these can be online or offline. For example, the development of partnerships between CH institutions and online digital portals such as *Europeana*⁸ allow European institutions to share their digital collections with global communities helping to make their collections more accessible. Other online collaborations include *Research Space*, an online collaborative environment for humanities and cultural heritage research⁹ and Google Cultural Institute.¹⁰

There is a tendency for individual CH institutions to develop their own digital agenda and the development of DT is undertaken on a one-to-one basis – what works in one CH institution will not necessarily work in another - and the visitor has to adapt to each institution leading to a lack of interoperability and fragmentation. According to some, this will be detrimental to the future of the CH sector, particularly in the light of emerging technologies such as the Internet of Everything (IoE). For future experimentation and innovation in DT in the CH sector, interoperability is essential as it “lowers barriers to innovation and is fundamental to the creation of participation”.¹¹

Sustainability: Many of the projects researched raised issues of sustainability as they only last for the lifetime of the funding. In many cases there is no follow-on funding and projects are simply abandoned or staff associated with a project may move to another institution. Some, however, are a catalyst for a continuum of experimentation and change through the relationships developed

⁵ Ibid. With the caveat that “the opportunity afforded by digitisation and new technologies, which would never replace access to the original heritage or the associated benefits of traditional forms of participation in culture, should not lead to negligence in the conservation of originals or disregard for traditional forms of promoting culture, whether during or after digitisation”.

⁶ Ibid. See Items 45 and 56.

⁷ For a definition of interoperability see RICHES Taxonomy:
<http://resources.richesproject.eu/research/taxonomy/terms-and-definitions/#i>

⁸ <http://www.europeana.eu/portal/>

⁹ <http://www.researchspace.org/>

¹⁰ <https://www.google.com/culturalinstitute/home>

¹¹ Maurizio Pilu, Executive Director for collaborative R&D at Digital Catapult quoted in Kobie 2015.

during the initial project. The issue of sustainability may be due to time and financial constraints or a lack of technical skills on the part of CH practitioners.

Evaluation: DT projects are rarely tracked beyond the funding period and there appears to be a lack of evaluation in terms of visitor experience or revenue growth. Although the evaluation of exhibitions is a long-standing practice in most CH institutions, the evaluation of DT has not yet been fully recognised. Evaluation of DT is essential to measure the success and impact on the institution, on CH professionals and on audiences. This can determine if the institution's objectives have been achieved: whether sales, views online or visitor numbers have increased. Information gathered would provide evidence of the impact of DT on the visitor and how it enhanced personal or social experience of CH, onsite, online and mobile. Evaluation may point to the need for further research, support funding bids for new projects, reveal new skills required in the sector and the educational potential of DT in CH. The evaluation process requires specific skills and knowledge which some CH professionals feel that they lack and this has been identified as a barrier which prevents them from embarking on a DT project (Lomas, Hutcheson and Dawson 2012).

The Economic dynamic: European CH is of exceptional economic importance and has the power to support economic growth and regional development particularly through the employment of DT. RICHES research indicates that by developing innovative technologies which enhance the CH visitor experience, CH institutions can increase consumption by attracting a new generation of visitors whilst maintaining existing visitor numbers, and so continue to contribute to Europe's creative economy. Revenue can be increased through activities such as online ticketing, marketing and crowdfunding.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The recommendations are aimed at policy-makers at European, national, institutional and local levels.

The CH institution

Recommendation: Further research is recommended into the impact of digitisation on CH professional identities, expertise and skills.

European support and funding for the CH sector recognises DT as a driver of change and as an important factor in European growth; the sector can be said to have cultural, social and economic value. Based on the evidence of European support and funding initiatives, the implementation of DT in CH institutions will continue to grow and this will bring further changes to institutions. Different institutions, particularly those with limited resources, must explore the extent to which DT can enhance their work. This, however, will involve taking risks, investing time and effort to experiment, being entrepreneurial and relinquishing some institutional control in allowing the visitor to participate and co-create CH. The CH institution must develop a policy regarding opening up their collections and they need to be:

- dialogic and responsive to the needs of their audience
- open to sharing collections, knowledge and expertise (online and with other CH institutions)
- open to collaborative, interdisciplinary working partnerships (internal and external/online and offline)
- more innovative, competitive and entrepreneurial
- more creative in developing participatory and co-creative practices to engage audiences

Digital literacy needs to be a requirement across the institution. Internal collaboration can be optimised by the adoption of digital technology. However these new skills do not simply replace existing ones but enhance and complement them to bring a richer and expanded set of skills among the workforce.

Institutional Digital Strategies

Recommendation: Institutions need to review their digital strategies in order to verify they are applicable and effective in enriching the CH experience.

Digital strategies should focus on how to bring CH closer to audiences or users by designing digital experiences according to the needs, expectations, motivations, lifestyles, identities and skills of different kinds of audiences and experimentation with different mediation platforms and formats like digital storytelling and collaborative platforms. Digital strategies should be sustainable, transparent and published on institutions' websites (see, for example, the Tate). The choices associated with a digital strategy help to characterize a CH institution and enable differentiation between institutions. "Digital strategies are not so much technologies as they are ways of using devices and software to enrich education and interpretation, whether inside or outside of the museum. Effective digital strategies can be used in both formal and informal learning; what makes them interesting is that they transcend conventional ideas to create something that feels new, meaningful, and 21st century" (NMC Horizon Museum 2015: 34).¹²

Digital Technology supports/launches new research

Recommendation: CH institutions should continue to invest in the expansion of DT infrastructure to enable them to be part of the future digital society.

This will bring further changes that will require new policies to guide resource allocation, licensing and rights of co-created content and further DT applications to enable use of content.

Recommendation: The design of DT for CH should be relevant for purpose.

In the development of DT, it is essential to take into account the specifics of the museum's collections and also the user perspectives; the user must be one focus of the design process and this should be followed up by comprehensive user-testing.

Recommendation: Designing DT for the CH sector:

- The design should reflect the CH institution's digital strategy and purpose and have clear objectives and motivations for implementing DT.
- The institution should be aware of specific advanced technologies, e.g. semantic or linked (open) data and DT should be used to support and enhance lifelong learning, formal and informal learning within the institution, online or offline.
- The DT should give a personalised experience of CH to enable them to choose what and how much they want to learn about CH.
- Copyright information regarding the use, re-use and re-mix of digitised materials for personal or commercial use should be made clear.

The CH Audience

Recommendation: CH institutions need to build and sustain relationships with audiences and balance the use of DT with more traditional methods.

An institution's public engagement strategy needs to cater for diverse audiences that are plural, multicultural and include people with disabilities. There is a need to recognise that not all audiences want to engage with digital content and that there should be a balance with the use of more traditional methods of engagement. Audiences have their own cultural capital and require an individual and personalised way of using DT according to their own interests and preferences.

Collaborative Partnerships

Recommendation: CH institutions should actively engage in collaborative, interdisciplinary partnerships.

Working in partnerships and collaboration in multi-disciplinary teams, sharing knowledge and developing new ways of working can be transformative and can recalibrate relationships not only between CH professionals but also with visitors in enhancing their engagement with, and experience of, CH. The collaborative partnerships and the experimental development of innovative technology, which aims to engage visitors and see them as relevant in the design process, are

¹² <http://cdn.nmc.org/media/2015-nmc-horizon-report-museum-EN.pdf>

important factors in the shaping of the future for the CH sector. Indeed, it can be argued that these new relationships are key to the future health of the sector.

Interoperability

Recommendation: CH institutions should work together, to inter-operate and co-operate, in the sharing and exchange of knowledge and information.

This is particularly important for DT and for the promotion of policies that support and fund innovation in DT.

Specific recommendations addressing European and national policy-makers:

Recommendation: The development and maintenance of a European website (online platform) for the systematic gathering, archiving and sharing of digital projects for the CH sector.

There are many experimental and innovative DT projects in CH that are not widely known in the sector and which could be made more visible. CORDIS¹³ is the European Commission's primary public repository and portal to disseminate information on all EU-funded research projects and their results, but this is very broad and covers a diverse range of topics. A platform specifically designed for the gathering of data on digital projects for CH institutions would facilitate the sharing of expertise and knowledge, could help to avoid fragmentation and duplication of projects, stimulate new projects and allow the "exchange of experience and best practices".¹⁴ It could include the evaluation of projects and a forum to discuss, share and communicate the lessons learned, have information on partnerships, and help to promote interoperability. Sharing can enable the repositioning of content in new contexts, which further increases access to collections.

The development of digitisation is, in itself, part of our emerging cultural heritage. The history of DT in CH, like any other history, needs to be preserved and archived and scholars will have difficulty in researching it if it is not available; access to the recommended platform could be the starting point for their research. The development and viability of the platform will, however, require commitment and the allocation of resources.¹⁵

Specific recommendations addressing institutional, national and local policy-makers:

Sustainability

Recommendation: Sustainability should be part of the initial planning process and the life of every DT project.

For DT to be sustainable it has to become an intrinsic part of the CH institution's public engagement strategy. Sustainability can be interpreted in different ways: it could mean that a project continues; it could mean that one project provides the springboard for another; it could mean that knowledge exchange and transfer takes place across the CH sector or that there is long-term access to the use of content.

Evaluation

Recommendation: Future research is recommended to determine qualitative and quantitative measures that evaluate DT success and to develop a best practice benchmark.

The outcomes of implementing DT in a CH institution need to be measured and evaluated. CH professionals should be trained in effective evaluation methods in order to assess the impact of the new technology on the institution, on the development and research of the collection, on CH staff and on user-engagement and experience.

Ethics

Recommendation: Further research is needed into the ethics of digitisation.

¹³ <http://cordis.europa.eu>

¹⁴ *Towards an Integrated Approach to Cultural Heritage for Europe*, European Parliament Resolution, 8 September 2015(2014/2149(INI), (Item 39): <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2015-0293+0+DOC+XML+V0//EN>

¹⁵ *Ibid.* This is in addition to Item 7 (a).

The ethical dimensions of data and information-gathering from CH visitors should be considered in order to avoid potential accusations of unethical practice. CH institutions need to be transparent in explaining their motives for using information - where the balance lies between financial gain, democratic engagement and visitor enhancement.

Economics

Recommendation: CH institutions should allocate resources to ensure a) the presence of skilled staff and b) the development of long-term solutions to DT activities (e.g. sustainability).

These two elements will lead towards innovative applications of DT. In an era of financial crisis and funding cuts, the development and implementation of innovative DT is of paramount importance in keeping pace with these changes, to compete with other industries and to maintain the potential for economic growth.

RESEARCH PARAMETERS

One of the aims of the RICHES project was to investigate the changing environment in CH institutions. Extensive research was undertaken into the development and use of emerging and innovative DT in the sector which is having a transformational impact on CH institutional practice and this revealed some of the changes in CH practice brought about by digitisation.

Research methodology included desk research on, and literature review of, the 'new museology' to gain an understanding of the changes and shifts in how CH institutions relate to, and communicate with, audiences in the course of the last three decades. A diverse range of best practice projects in the development and implementation of DT in the CH institution were identified. Experimentation and innovation in DT is contingent upon funding. Research was undertaken into initiatives, policies and strategies across Europe that encourage and support experimentation and innovation in DT for the development of the CH sector and economic growth.

Case Studies

Many case-studies were researched during the course of the project, chosen on the basis of the interdisciplinary, collaborative research that developed experimental and innovative DT for application in the CH sector. They reveal that through adopting and experimenting with DT, new practices emerge. These changes in practice, knowledge and skills can result in the recalibration of relationships between the CH institution and its audiences and between the CH institution and the research institution - one of the aims of the RICHES project. Semi-structured interviews based on a specifically-designed questionnaire, were undertaken with professional staff in museums and universities. Two case-studies were chosen for in-depth investigation.

Case Study 1: ARtSENSE (Augmented Reality Supported adaptive and personalized Experience in a museum based on processing real-time Sensor Events): Adaptive Augmented Reality for CH.

This case study was based on the ARtSENSE project. It examined the use of augmented reality in the CH sector and the emerging innovative development of this technology and its potential to provide a personalised, adaptive CH experience. This was achieved through the close collaboration of CH institutions, academic researchers and technologists. The case study explored the collaboration and partnership, the rationale for the project, the objectives, aims and methodology. It then discussed how this technology was applied in three CH institutions who were partners in the project. In developing wearable and non-intrusive technology, the ARtSENSE project revolutionised adaptive assistance. ARtSENSE technology in adaptive augmented reality is the beginning of a new generation in the experience of CH within and beyond the CH institutions walls.



Augmented VIP pillars at FACT, Liverpool, UK
Copyright ARTSENSE project

The success of the project was described by the project partners: “The ARTSENSE device represents a breakthrough in the application of new technologies to CH institutions and creates new communication channels between museum visitors and artworks” (Damala et.al 2012: 755).

Case Study 2: GHOSTS IN THE GARDEN

This case study explored the *Ghosts in the Garden* collaborative project in which innovative and experimental technology was designed and employed to revitalize and reinvigorate the historic Georgian Sydney Gardens in Bath, England. Based on the idea of time-travel, present-day visitors could engage with archival research, soundscape and a live action game, all centred round a ‘Georgian Listening Device’ now referred to as a ‘Time Radio’. It aimed to create a visitor experience to transport the visitor back in history to meet and interact with historical characters, listen to their stories and respond to them. The case study investigated the development of the project, the concept, collaborative partnership and the technology, contextualised within the changes in the CH sector brought about digital technologies.



Ghosts in the Garden: Wooden Georgian ‘Time Radio’
Copyright: Laurens Knockles

Both case studies are examples of CH delivered in new ways, how it can be transformed by DT and how it is influencing and shaping the environment of change in our society; they also open the way to new, distributed, ways of working, communicating and investigating new products and services in the CH sector, as in other sectors.

PROJECT IDENTITY

PROJECT NAME	RICHES: Renewal, Innovation and Change: Heritage and European Society
COORDINATOR	COVENTRY UNIVERSITY (COVUNI) Coventry, United Kingdom Neil Forbes, Project Coordinator, n.forbes@coventry.ac.uk
CONSORTIUM	HANSESTADT ROSTOCK (ROSTOCK) Rostock, Germany STICHTING NATIONAAL MUSEUM VAN WERELDCULTUREN (RMV LEIDEN) Leiden, The Netherlands STICHTING WAAG SOCIETY (WAAG) Amsterdam, The Netherlands THE UNIVERSITY OF EXETER (UNEXE) Exeter, United Kingdom PROMOTER SRL (PROMOTER) Pisa, Italy FUNDACIO PRIVADA I2CAT, INTERNET I INNOVACIO DIGITAL A CATALUNYA (I2CAT) Barcelona, Spain SYDDANSK UNIVERSITET (SDU) Odense, Denmark STIFTUNG PREUSSISCHER KULTURBESITZ (SPK) Berlin, Germany TURKIYE CUMHURİYETİ KÜLTÜR VE TURİZM BAKANLIĞI (KYGM) Ankara, Turkey
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DURATION	December 2013 - May 2016 (30 months)
BUDGET	EU contribution: 2,432,356 €
WEBSITE	RICHES website: http://www.riches-project.eu/ RICHES resources website: http://resources.riches-project.eu/

RICHES blog on Digital Meets Culture: <http://www.digitalmeetsculture.net/riches/>

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Use the hashtag #richesEU to join the RICHES Project community on Twitter.

Subscribe to the RICHES Project YouTube channel: www.youtube.com/richesEU

FURTHER READING

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Ghosts in the Garden image:

<http://www.splashandripple.com/ghostsinthegarden>