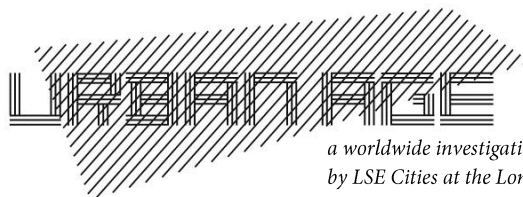




Photo: Stuart Freedman



LSE Cities



*a worldwide investigation into the future of cities organised
by LSE Cities at the London School of Economics and
Political Science and the Alfred Herrhausen Society, the
International Forum of Deutsche Bank*

REQUEST FOR PROPOSALS

for design, delivery and development services for new web app,
information architecture and visualisations for major research centre on
cities based at the LSE.

We are looking for dynamic design from agencies or freelancers with the following skills
and track record of innovation and excellence in digital design:

- ability to communicate effectively to wide audiences
- understanding of complex data sets
- knowledge of state-of-the-art content management and digital software
- experience of working with mixed media
- ability to work within tight budgets and strict timelines
- dynamic approach to complex briefs

Please contact p.griffiths@lse.ac.uk for access to sample content. Peter Griffiths can also
be emailed with questions or called on +44 (0)20 7107 5522.

Deadline: Friday 5 June 2015, 18:00 BST.

INTRODUCTION

CONTEXT

The Urban Age Programme, led by LSE Cities at the London School of Economics and Political Science with the Alfred Herrhausen Society, is an international investigation of the spatial and social dynamics of cities centred on an annual conference, research initiative and publication. Since 2005, over 10 conferences have been held in rapidly urbanising regions in Africa and Asia, as well as in mature urban regions in the Americas and Europe. As an event, the Urban Age catalyses the exchange of information, experiences and data across a global network of cities. Over 10 years, a tremendous amount of valuable information has been collected.

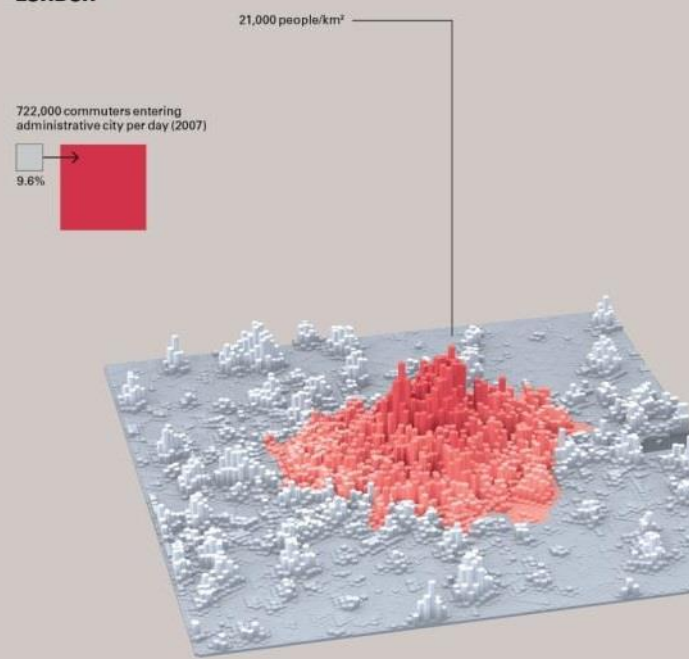
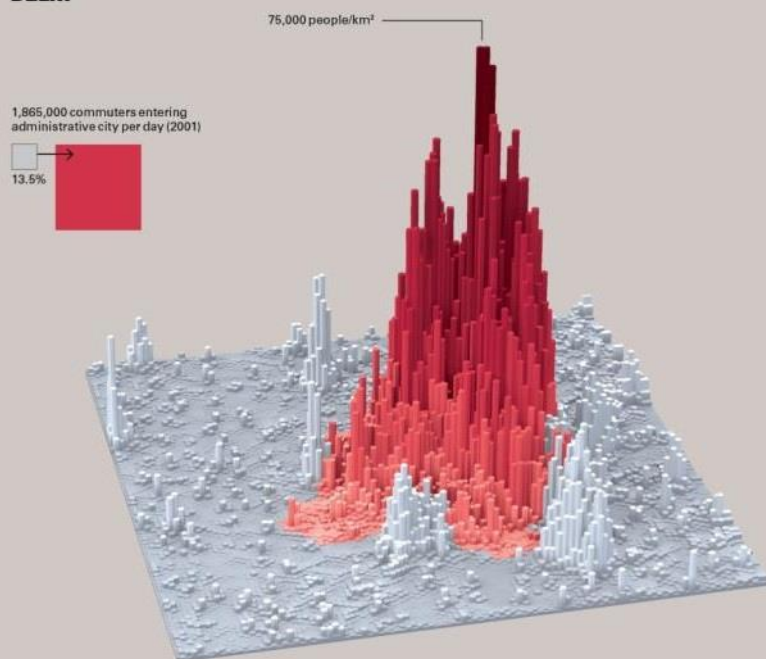
VISION

To celebrate 10 years of Urban Age, we want to commission a new innovative and creative web app to share what has been learnt more widely. Information is currently locked within each Urban Age publication – this project will expose the information, enabling users to easily access information and compare data.

LSE Cities' significant achievement has been to bridge the gap between academic research, policy makers, civil servants, professionals and the general public. A clear and accessible design language in print has been central to this. The aim is to find innovative and creative agencies/freelancers who can help us translate this to the web.

LSE Cities is looking for digital agencies(s) and/or freelancers who share our interest in urbanisation to:

- **Create an innovative, clear and accessible web app** to give existing Urban Age content an important web and mobile presence. Clear navigation, easy search, and being able to share content in useful formats is required to make content accessible to a diverse audience.
- **Present key narratives**, enabling users to discover a broad range of themes and the relationship between different themes. Allow users to explore Urban Age content through vertical (e.g. as part of a publication), horizontal (e.g. content drawn from several publications) links, and narratives with links to related content that weave together quantitative and qualitative content (e.g. by linking and relating photographs, charts, maps and essays).
- **Create new information architecture** for Urban Age content that will help to change how the Urban Age produces and shares existing content and new content on the web
- **Develop a strategy in collaboration with LSE Cities** for producing new content that facilitates digital sharing, avoids duplicating work for print and digital and explores methods of combining quantitative and qualitative research in order to explain what data means.
- **Develop new comparative visualisations** with existing and new data and maps.
- **Enable LSE Cities to trace and grow the audience and impact** of existing and new Urban Age content.
- **Integration with an existing WordPress website** is necessary.



3D Density

BUILDING A NEW DIGITAL APPROACH

URBAN AGE CONTENT

The [Urban Age](#) is an interdisciplinary programme that investigates the spatial and social dynamics of cities. This includes studying a wide portfolio of cities to communicate the impact of form, density, transport and governance. Compelling and comparative data visualisations, including a data matrix and striking photography ([email for access to sample content](#)), is part of a visual language that has helped increase interest in urban issues. Work has been presented in [15 conference newspapers](#), [two books](#) (400+ pages) and has been challenged and shaped by 200+ essays and 300+ conference presentations (including discussion sessions).

Urban Age content includes galleries (TIFF, EPS, JPEG), images (maps, data tables, charts all as EPS, AI, and some PSD), articles (stored in WordPress on [LSECities.net](#)), videos (stored on our [UrbanAge YouTube channel](#) and on [LSE's YouTube channel](#)), audio (mp3), PDF reports, and book content (essays and images). Individual content items will likely number into the thousands, but there are instances of several revisions of the same piece of content.

A great deal of content from the last 10 years is not currently accessible on [LSECities.net](#). Some of what is available can only be seen within PDF publications such as the Urban Age [conference newspapers](#). Most of the content, especially maps and data visualisations cannot be searched for. A selection of content that has been [adapted for the web](#) is embedded deep in the webpage structure making it difficult to find.

Internally at LSE Cities, it is often difficult to locate previous Urban Age content on the internal server as it is spread across various conference folders. Content cannot be searched for across various publications and sources. Effort has already gone into collating content into one place.

The compiling and archiving of the content will be undertaken by LSE Cities which will retain full editorial oversight. For most content the original files and layout documents (in InDesign) are available while others are only available as PDFs. Ongoing effort has gone into posting individual articles into WordPress (currently 250 articles) to make

them individually accessible and cleaning up the database to increase the semantic value of individual content items. However, images and data are largely missing from LSECities.net and a rationale of how best to store this content on the web is required, and whether additional meta data and/or tags are necessary. This content will need to be related to essay content, while remaining directly searchable.

Email p.griffiths@lse.ac.uk to access sample content. Feel free to use it as part of any pitch or presentation developed in relation to this brief. Below is a content overview with links to additional public content which may be of interest.

Content Overview

	Offline file types	Quantity
<u>Conferences (15)</u>		
<u>Videos</u>	VOB, AVI, raw footage	150
Audio	WAV, MP3	50
<u>PowerPoint slides</u>	PPT, PDF	250
<u>Conference Newspapers (15)</u>		
<u>Essays</u>	INDD (Indesign), PDF	250
Data (maps, charts & tables, not raw)	AI, TIFF, PSD, EPS, JPG, PDF	300
<u>Data matrix</u>	INDD, AI	6
Photography	EPS, JPG, TIFF, PSD	120
Full publications	INDD, PDF	15
<u>Conference Publications (5)</u>		
Essays	INDD (InDesign), PDF	30
Data (maps, charts & tables, not raw)	AI, TIFF, PSD, EPS, JPG, PDF	30
Photography	EPS, JPG, TIFF, PSD	50
Full publication	INDD, PDF	5
<u>Books (2)</u>		
Essays	INDD (InDesign), PDF	60
Data (maps, charts & tables, not raw)	AI, TIFF, PSD, EPS, JPG, PDF	150
Photography	EPS, JPG, TIFF, PSD	500
Full publication	INDD, PDF	2
<u>Future data visualisations</u>		
Maps	GIS, ai, eps	tbc
Charts	PDF, XLS	tbc
Tables	PDF, XLS	tbc

TARGETING USER GROUPS

The content created by Urban Age aims to interest and engage a broad range of users across various disciplines. As an outreach programme it supports cross-disciplinary awareness and understanding of urban issues. However, different user groups have varying practical uses for the content. The audience is primarily desktop based; however, mobile growth is significant. This is an initial overview of potential users and how they might use the content:

- **LSE Cities staff:** Explore and compare content, create new links, presentations, share content online, find, edit and update original (offline) files
- **University students:** Evidence and references for papers and presentations
- **Academics:** presentations, evidence and references for papers and policy advice
- **Policy makers and planners:** Evidence and inspiration for reports, proposals, programmes and policies
- **Politicians and local government:** Raising awareness, providing evidence
- **Consultants:** Evidence for reports and raising awareness
- **Urban designers and architects:** Broaden understanding of interdisciplinary urban issues
- **Journalists:** Providing content for articles, including themes, maps, infographics, references, and excerpts
- **School students:** Explore and learn about urban issues

RELATING CONTENT AND BUILDING NARRATIVES

Urban Age content relates within and across years as each year has added to the depth of understanding and portfolio of cities investigated. However, material is currently “stored” in each conference year. As part of the 10 year celebration, narratives and other relationships will be created to span across years and content types. This requires disaggregating content, while retaining the integrity of where content has come from; i.e. a search for a specific publication should provide an assembled version of the publication and an individual piece of content should provide a path back to the source publication.

Narratives are similar to a slide show presentation that pulls together a curated selection of content with an additional layer of annotation by the speaker. An example of what a narrative might look like is included in the [sample content](#).

Other types of **content relationships** between content may be:

Related – relationship not inferable, but editorially linked in database

An essay on governance may be related to a video on transport or a map showing municipal boundaries. This is similar to how many news agencies list related content.

Search: full set – relationship inferable, but limited to a specific set by year, city, or tag. This could be all the municipal boundary maps ever produced.

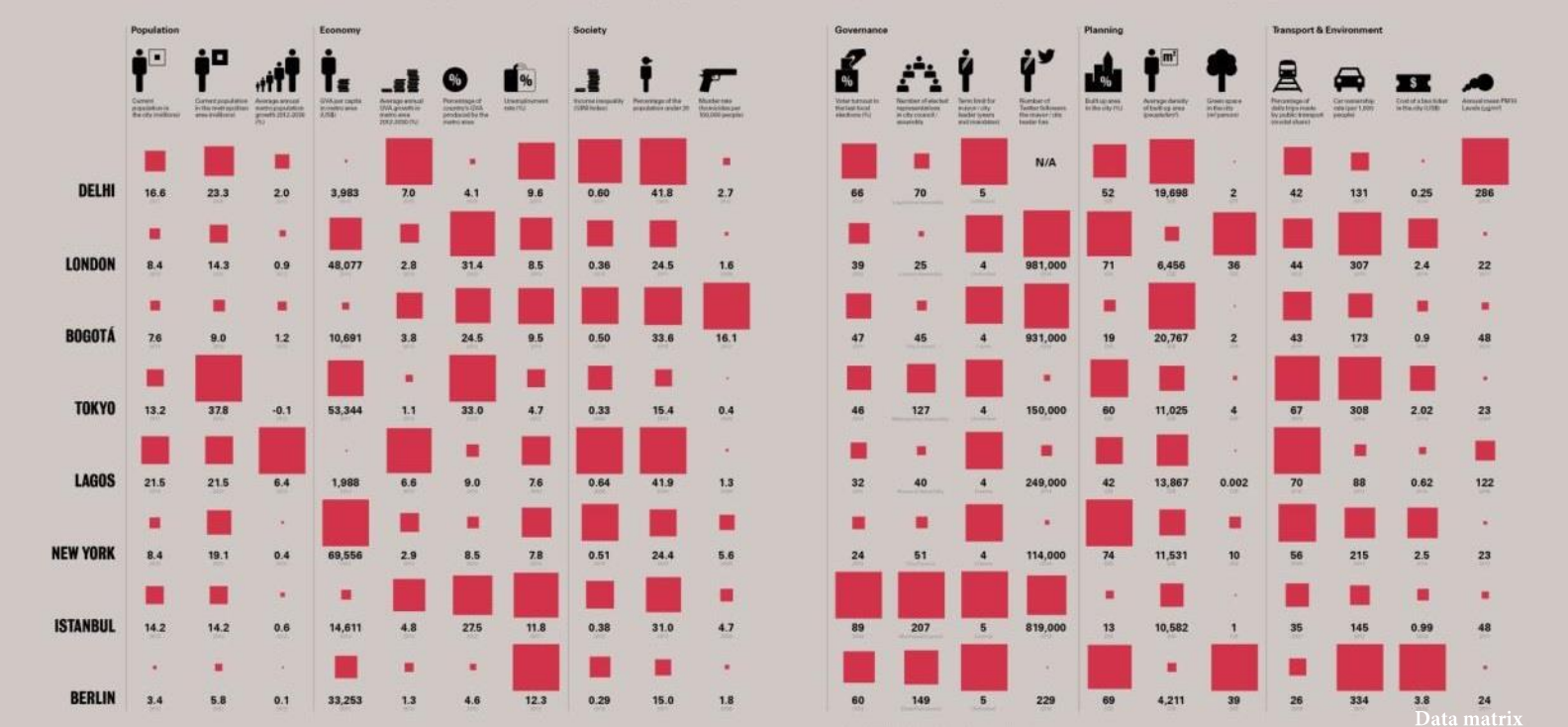
Search: partial set – relationship inferable, but limited within a specific set

This could be municipal boundary maps, but only for 2009 or only for Istanbul, or only for Istanbul in 2009. Boolean search logic applies.

Search: nested – content is displayed in relation to parent content

Some essays are available in English and a second language, like Mandarin.

Urban Age is an English service, however, it is helpful to show where content is available in a second language within a search tile. Similarly, conference presentations have audio, video and PowerPoint slides, which need only to be displayed with the parent content (i.e. the conference session).



WORK PACKAGES

The brief has been split into the following three work packages. Proposals can be submitted for all or any combination of the three work packages. Agencies/freelancers can submit a proposal in collaboration with other agencies/freelancers across the three work packages. LSE Cities will select either one or several agencies/freelancers to complete the project based on the quality of the submissions.

See the [technical specifications](#) at the end of the brief for additional information on the deliverables for each work package.

WORK PACKAGE 1: INFORMATION ARCHITECTURE

Develop and deliver an information architecture strategy and content management infrastructure for LSE Cities to efficiently manage, archive, retrieve and share a wide range of content. The strategy and infrastructure should:

- provide full search across the managed content
- be flexible to incorporate and manage a wide range of content types, files types, taxonomies and metadata.
- be able to scale and accommodate large quantities of future data and content
- ensure consistent organisation of metadata with minimum effort and as little room as possible for manual mistakes
- provide configurable workflows to sustainably build various output formats from the source materials
- positively impact on LSE Cities' internal research workflow
- allow LSE Cities staff to access original source files and data
- provide flexible access control functionality to limit access to specific sets of content to specific groups of users (e.g. no raw source content should be accessible by the general public)

WORK PACKAGE 2: WEB APP

Develop and deliver a web application to make database content organised under work package 1 accessible and shareable. The web app should:

- present an innovative, simple and clean design and pleasant user experience
- extend Urban Age's existing print design logic onto the web (including mobile), while communicating clear navigation
- allow users to access content through:
 - search (including real-time search suggestions, Boolean operators and being able copy and paste search queries into other documents, e.g. e-blast newsletters)
 - filter list/faceted navigation to browser and select content according to different taxonomies
 - data matrix and maps developed in work package 3
 - links to related content (suggestions generated algorithmically and through curated associations)
- make the database content accessible and shareable (including direct links to pre-configured 'views'/searches of the content)
- take users through narratives of curated content prepared by LSE Cities researchers

WORK PACKAGE 3: WEB VISUALISATIONS

Develop and deliver data-driven and interactive web visualisations integrated into work package 2 web app based on existing and new LSE Cities research data. These may include:

- world map or 3D globe to browse and select content by location and to display selected data
- data matrix to browse and compare data by city, theme and indicators and to link to other content by city/theme/indicator

Additional data-driven and interactive web visualisations could be:

- charts and other visualisations
- map and GIS-based visualisations
- 3D population density maps

New visualisations will likely have an impact on how LSE Cities prepares visual content in future. This means there is scope for submissions to go beyond the points presented above; however, it would need to be clear that this direction is sustainable.

PROCESS

SELECTION PROCESS AND TIMELINE

- Friday 5 June 2015, 18:00 - Deadline for proposals for all 3 work packages
- Mid-June 2015 – Presentations/interviews of shortlisted agencies
- Early July 2015 – Appointment(s) made
- Expected completion dates:
 - Work package 1: 6 August 2015
 - Work package 2: 23 September 2015 (feature ready for testing)
 - Work package 2: 23 October 2015 (go live)
 - Work package 3: 1 October 2015

Dates may be subject to change.

SUBMISSION REQUIREMENTS

The following elements must be included in each proposal submission. Please stick to the limit of A4 page sides to facilitate evaluation.

General

- About your agency (Max. 1 A4 side)
- About your approach to this task (Max. 1 A4 side)
- Team members' experience, expertise and role in project (Max. 1 A4 side)
- Portfolio of relevant projects including brief description or project, role in project, screenshots, work package(s) it is relevant for and web link where available. Maximum of 6 projects. (Max. 6 A4 sides)
- Proposed timeline with task breakdown for each package being submitted (Max. 1 A4 side)

For **each** package being submitted

- Work plan including main tasks and approach to delivery (Max. 2 A4 sides)
- Budget proposal including all costs (i.e. day rates of project team, travel, meetings or workshops) (Max. 1 A4 side)

SUBMISSION EVALUATION

Submissions must include all the requirements above. Evaluation will be based on:

- Innovation and creativity of proposed solution
- Experience and expertise
- Work plan
- Technical solution
- Budget and timeline
- Familiarity and interest in urban/policy issues and experience of working on non-commercial projects an advantage
- Clear and clean submission with limited jargon (the submissions will be evaluated by a cross-disciplinary team including architects, designers, engineers, sociologists and journalists as well as in-house digital experts).

ADDITIONAL INFORMATION

TECHNICAL SPECIFICATIONS

WORK PACKAGE 1: INFORMATION ARCHITECTURE

Deliverables:

- A **database-driven content management infrastructure** to enable LSE Cities staff to manage research content for the website according to the information architecture strategy manual; this content management infrastructure must:
 - provide a web interface allowing content to be managed quickly and metadata updates to be applied consistently to large subsets of content items
 - expose an API to be used by the web app developed in work package 2
 - be based on widely used free/open source software systems or libraries to avoid vendor lock-in
 - allow the configuration of the system to be managed in-house in the future through versioned database migrations (i.e. it must be possible to add new data structures and configurations and to update existing ones by running idempotent migrations; “point-and-click” and other non-reproducible configuration management strategies are not suitable)
 - allow the system itself to be deployed, updated and managed in-house using commodity Linux VMs or IaaS/PaaS services (e.g. Amazon AWS, Rackspace Cloud, Heroku, etc.)
- The full source code of any software developed as part of this work package, including any scripts and configurations necessary to build and deploy the web app from source code (e.g. grunt/gulp configurations, DevOps configurations, etc.), must be released under a suitable free software license to be agreed with LSE Cities; alternatively, the copyright to the full source code must be assigned to LSE Cities
- An **information architecture strategy manual for LSE Cities staff**; this needs to include a *section aimed at all research staff* (providing clear guidelines for the preparation of data that will later be published in print and online), as well as a *section aimed at content editors* (providing clear guidelines for preparing content for updates to the Urban Age website and for printed publications)

Roles and skills:

- information architecture
- full stack development
- DevOps (setup of deployment, backup and monitoring configurations)

WORK PACKAGE 2: WEB APP SPECIFICATIONS

Deliverables:

- A JavaScript web application for the Urban Age web app; the application must:
 - allow tracing how content is used and by whom (including when LSE Cities content is embedded on external pages)

- build on Urban Age graphic design
- employ responsive web design with a mobile-first, progressive enhancement approach
- interface with LSE Cities internal content API (this includes an existing API exposing content, data and metadata managed in WordPress, as well as the API endpoints provided by the research content management system developed in work package 1)
- be based on widely used free/open source software systems, libraries or frameworks (e.g. AngularJS, EmberJS, etc.) to avoid vendor lock-in
- The full source code of any software developed as part of this work package, including any scripts and configurations necessary to build and deploy the web app from source code (e.g. grunt/gulp configurations, DevOps configurations, etc.), must be released under a suitable free software license to be agreed with LSE Cities; alternatively, the copyright to the full source code must be assigned to LSE Cities

Roles and skills:

- user experience
- responsive web design
- frontend development

WORK PACKAGE 3: WEB VISUALISATIONS SPECIFICATIONS

Deliverables:

- Web visualisations to be integrated in the Urban Age web app developed as part of work package 2; each visualisation should:
 - use a consistent visual style(developed as part of work package 2, but potentially extending it for visualisation-specific elements)
 - display properly across different screen sizes and layouts, by employing responsive web design to the extent possible for data visualisations
 - only rely on source libraries, packages and modules available under a free/libre/open source license (D3.js, Three.js, etc.)
- The full source code of any software developed as part of this work package, including any scripts and configurations necessary to build and deploy the web app from source code (e.g. grunt/gulp configurations, DevOps configurations, etc.), as well as any data analysis and data processing code, must be released under a suitable free software license to be agreed with LSE Cities; alternatively, the copyright to the full source code must be assigned to LSE Cities

Roles and skills:

- data analysis and processing via R/Julia/Python code (or other suitable languages widely used in data science for reproducible research)
- strong data visualisation skills with D3.js and related libraries
- frontend development

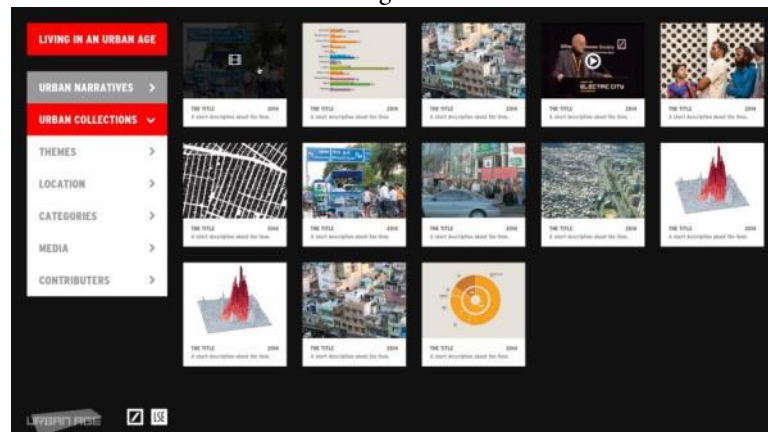
PRELIMINARY STUDY

A preliminary study was undertaken to understand how the web app could look and function. A [basic test search interface](#) was set up using the current online content. Website mockups were also created including a map locating the urban age cities and some of the web app search results, a screenshot of how one of the narratives could take a user through Urban Age content and an idea of how the content could be searched and filtered. This is only an initial study and digital agencies are expected to develop different and more innovative layouts and designs.

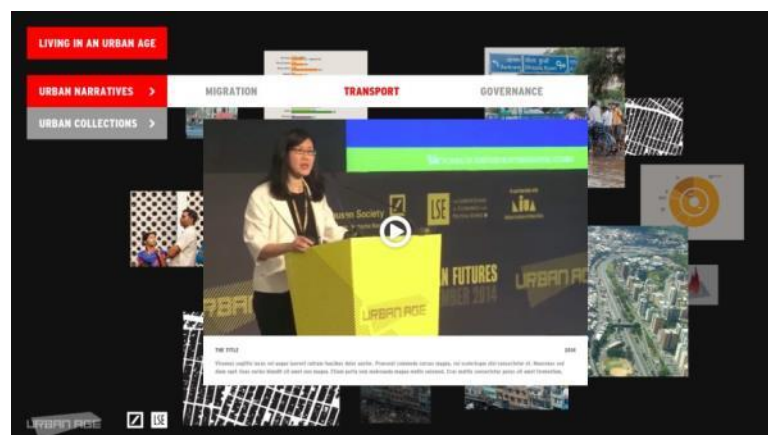
Map view to geographically access content.



Search and browse functions with grid view of content.



Annotated narrative using curated selection of content.



SAMPLE WEBSITES

This is a sample of the sites the team considered while writing this brief to get an idea of what was required. It is included to give applicants an idea of what the team has already been exposed to. There is no expectation that agencies will deliver proposals matching this list as it is assumed agency experience will guide the project.

<http://www.informationisbeautiful.net>

The website contains data visualisations from the book and makes some of them interactive. They are interesting because they are showing someone's focused interpretation of data. However, by listening to the author's RSA podcast it becomes evident that the visualisations would benefit from some narrative and links to a more qualitative understanding. The raw data from the research is made available in google tables that have also been designed to be easily useable. All graphs can be copied or shared as images and contain the website link, sources and authors at the bottom.

www.big.dk

This example of an innovative archive website takes the user directly into the content which is represented by icons and can be reorganised by various categories or on the globe. Scrolling down is the "traditional" webpage with news, about and other sections. Scrolling up, archive contents are displayed in the full window. This is an example of how the web app could work, although the navigational design and content would need to be more obvious. The globe could be an example for an interactive map. While content could be located on it, it could also be used to display geographic data, e.g. world maps of population density or GDP.

<http://outmywindow.nfb.ca/#/outmywindow>

Complex and inspiring online interactive documentary funded by the Canadian National Film Board. It is a good exploration of using different combinations of media and can provide ideas for creating future online content to be included in the web app. However, not appropriate for mobile and may have limited stickiness.

<http://www.sbs.com.au/cronullariots/documentary#chapters/introduction/map>

This webpage for a documentary integrates a map and timeline. Moving through the timeline zooms the user in to different parts of the map. In the same way, going through a narrative of the Urban Age web app could take the user to different parts of a map or piece of content in the archive.

<http://www.olympicstory.com>

Good example of integrating videos, photographs, tables, a map and graphs in a website, however navigation is not always intuitive.

<http://www.dadaabstories.org/#categorie>

Interesting use of video and floating navigation to make a blog site more coherent by tying in top-level themes on each page; interface can be buggy.

<http://visualizing.org/full-screen/565396>

Using interactive visualisations with the aim of telling a narrative

