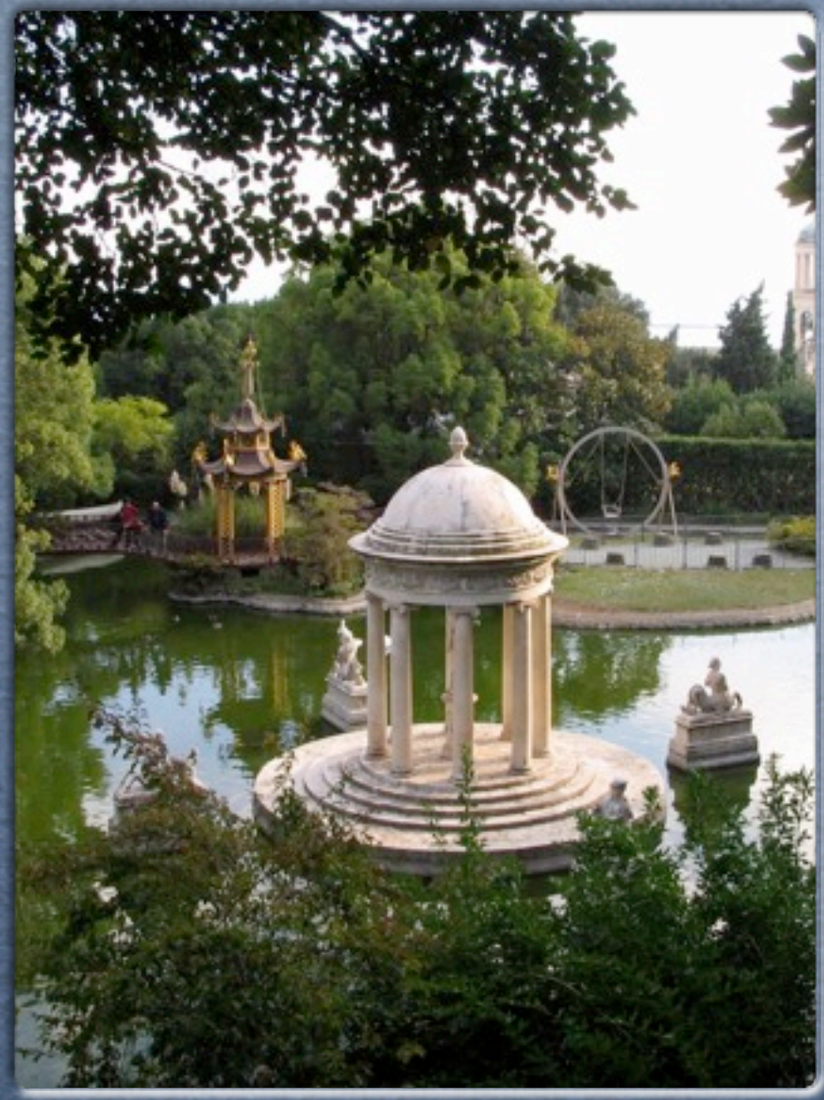
Project Smart Museum & Park



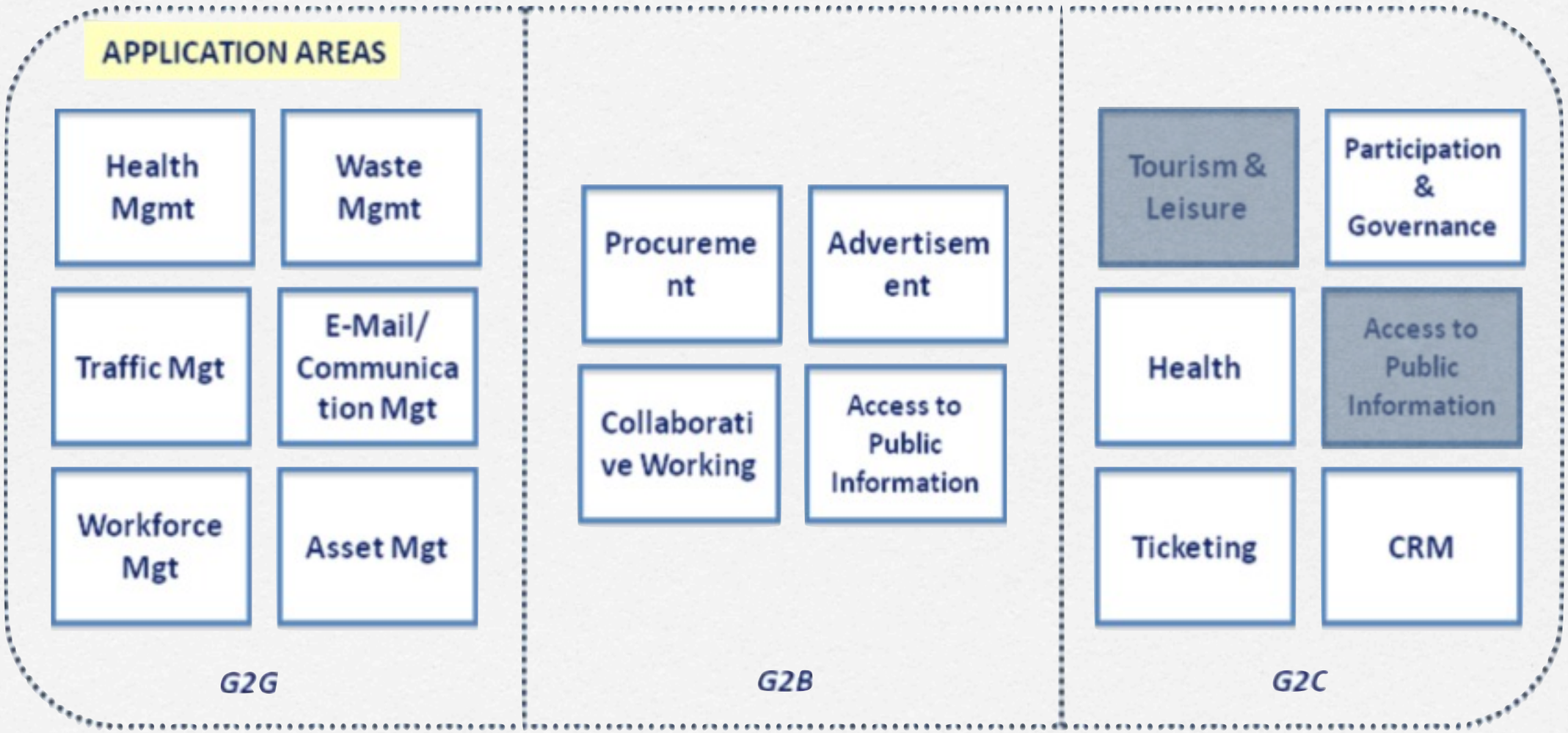
A Revival of Interest in Greenery

- In recent years, the need of the contact "between man and nature" on the part of citizens has increased more and more both for the reaffirmation of a growing need for nature and for the recognition of the intrinsic values of the "green".
- This need has increased the interest not only in parks and historical villas but also in urban greenery surrounding the city, including also the historical anthropic elements presented (for instance San Tecla's Fort).

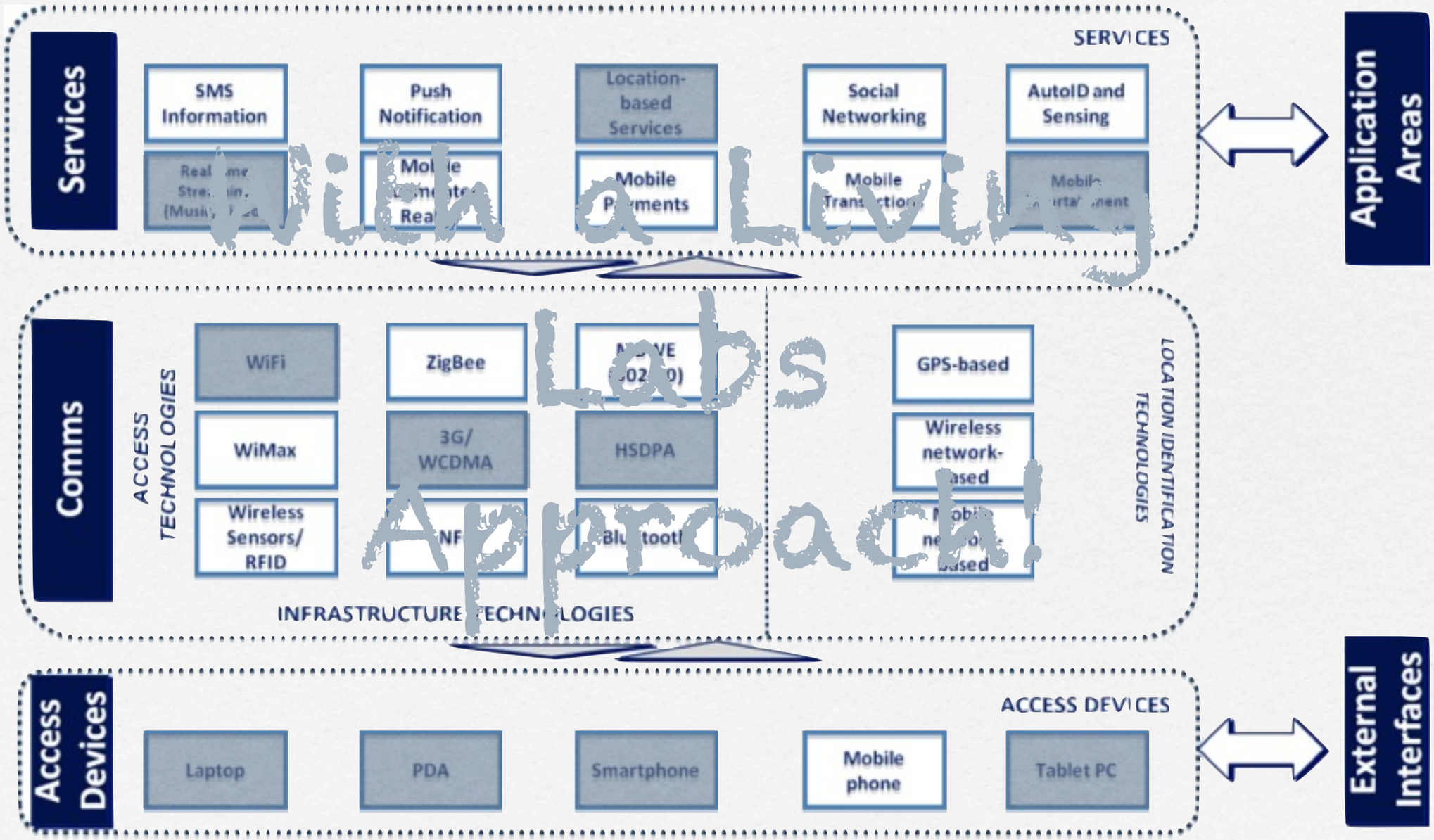
First Steps

- [ ] Selection of Application Area
- [ ] Selection of Service
- [ ] Selection of Infrastructure Tech/ Comms, Access Devices and Implementation Technologies

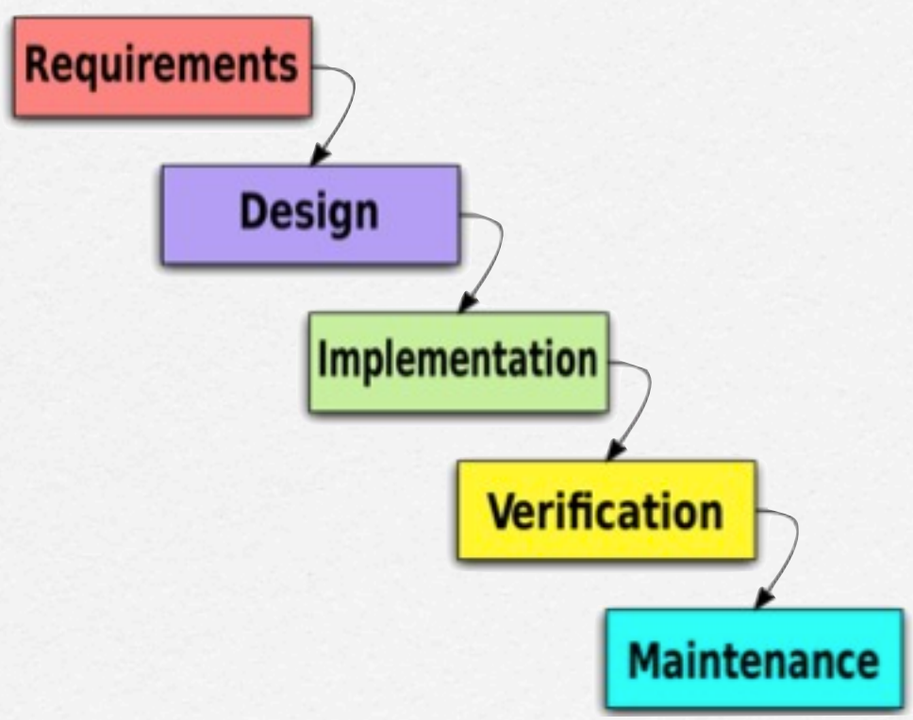
Application Areas



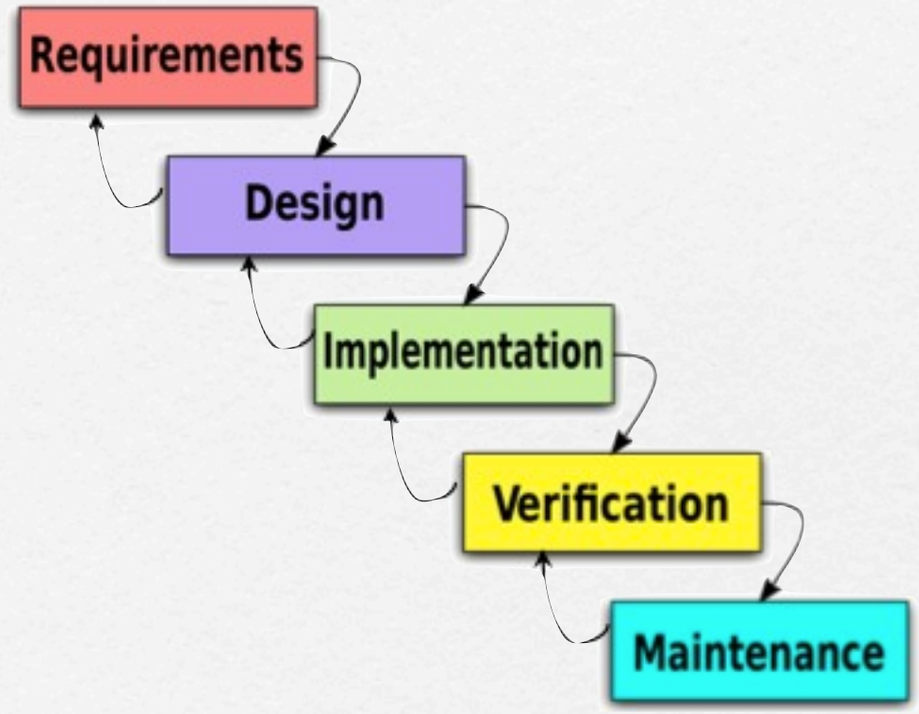
Services, Comms and Access Devices



The Development Process: The Waterfall



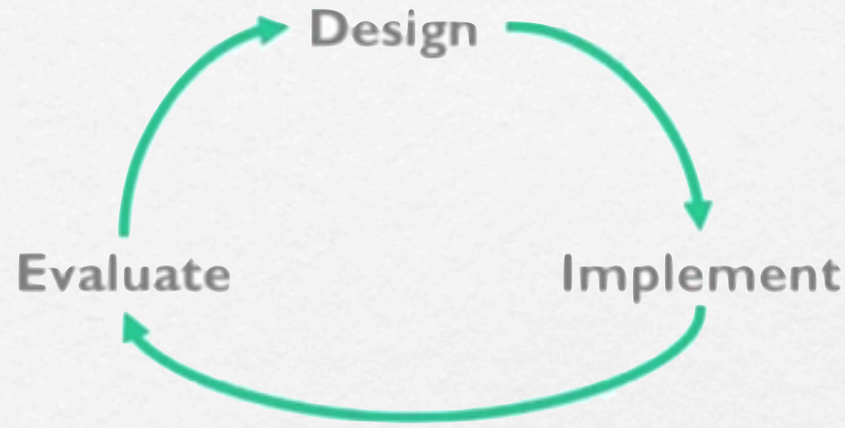
Classic Waterfall Model

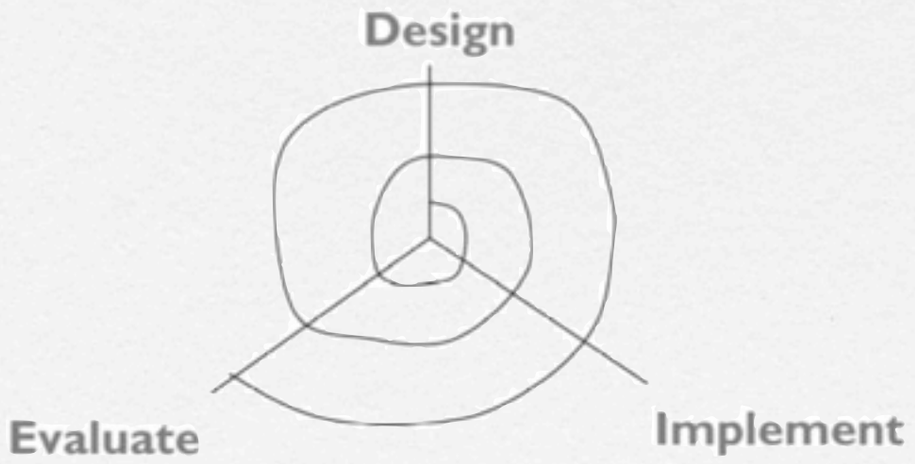


Waterfall Model with FeedBack

The Development Process: Spiral Model

- Several iterations into the design process.
- Early iterations as cheap as possible.
- The radial dimension of the spiral model corresponds to the cost of the iteration step or, equivalently, its fidelity or accuracy.





User Centered Design

- ☐ Users are at the center of the design process.
- ☐ It is an iterative design process.
- ☐ Early focus on users and tasks:
  - ✓ User analysis (who the users are)
  - ✓ Task analysis (what they need to do)
  - ✓ Users are involved as evaluators, consultant, and sometime designers
- ☐ Constant evaluation throughout the iterations – users are involved in every iteration
  - ✓ Every prototype is evaluated somehow

Pilot Project: Villa Pallavicini

- This park lends perfectly itself to carry out a project that encourages the revival of interest and the knowledge of nature because it was a romantic port of the 19th century and especially because it has an extraordinary botanic garden.

- The Villa Durazzo-Pallavicini is in Pegli near the station, in a residential quarter in the west of Genoa. Attached to the villa there is the Museo di Archeologia Ligure, one of the most important museums of archaeology on a national scale. The park and botanical garden are open daily.

Pilot Project: Santa Tecla's Fort

- Built in the XVIII century at 180 m above the sea level where once there was the Oratory of Santa Tecla, which gave the Fort its name.

- The construction of the fort was planned by engineer Jacques De Sicre within the wider project of fortifying the city of Genoa, against the Austrian's siege.

Smart Museum & Park
More secure and Interactive

- Informal and custom approach thanks to Qr-Code and Isaac
  - by Age
  - by Needs
- Managing data in a central database, according to pre-ordtinate procedures could produce differentiated information. (New Tourism Website)
- Interaction could happen with many different methodologies and with the integration of management, access and data transmission techniques.
- Information spread without charge thanks to Wi-Fi. (Genova Free Wi-Fi)
- A video vigilance system. (Axis, Mobotics)

Qr-Code Technology

- QR code (abbreviation for Quick Response code) is a specific matrix barcode (or two-dimensional code) that is readable by dedicated QR barcode readers and camera telephones. The code consists of black modules arranged in a square pattern on a white background. The information encoded may be text (up to 4096 chars), URL, or other data.

- We want to replace/integrate the "obsolete" textual description with appropriate QR-CODEs that can be read with up-to-date smartphones.

- These smartphones refer to prepared sections of the tourism portal, with downloadable multimedia contents depending on visitor's knowledge and age, making the visit to the parks a unique, all-round and 360-degree experience.

How Qr-Code Works?

- Version Information
- Format Information
- Position Information
- Alignment Information
- Timing Information

Generating a Qr-Code

Url Qr-Code

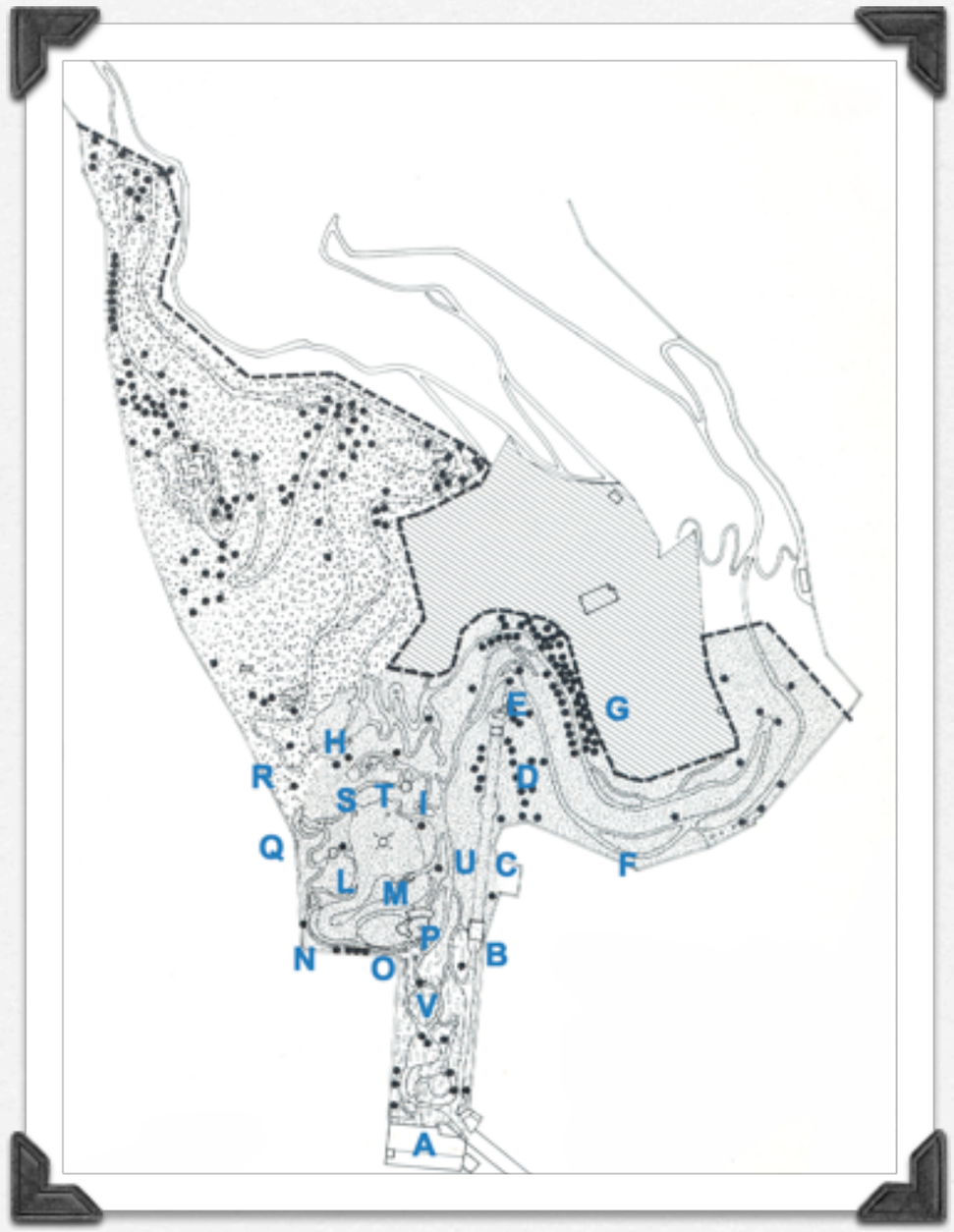
Text Qr-Code

Isaac

- A working prototype is available at: http://isaac2.comune.genova.it/

Next P.O.I for Villa Pallavicini

ID	AREA
A	Tribuna Gotica
B	Coffee House
C	Viale Classico
D	Arco di Trionfo
E	Casa dell'Eremita
F	Oasi Mediterranea
G	Le Camelie Antiche
H	Lago Vecchio
I	Le Grotte
L	Tempo di Diana
M	Lago Grande
N	Obelisco Egizio
O	Tempio di Flora
P	Serra di Flora
Q	Chiosco Turco
R	Monumento a G.Chiabrera
S	Ponte Romano
T	Chiosco delle Rose
U	Pagoda e Ponte Cinese
V	L'aquila e il coccodrillo



Assignment for contents according to age and education

User	Recreational	Scientific (simply)	Scientific (deepen)	Scientific (technical)	Historical Environmental	Costums and traditions
Baby	✔					
Student	✔	✔			✔	✔
Teenager		✔	✔		✔	✔
Adult			✔		✔	✔
Adult with specific skills				✔	✔	✔

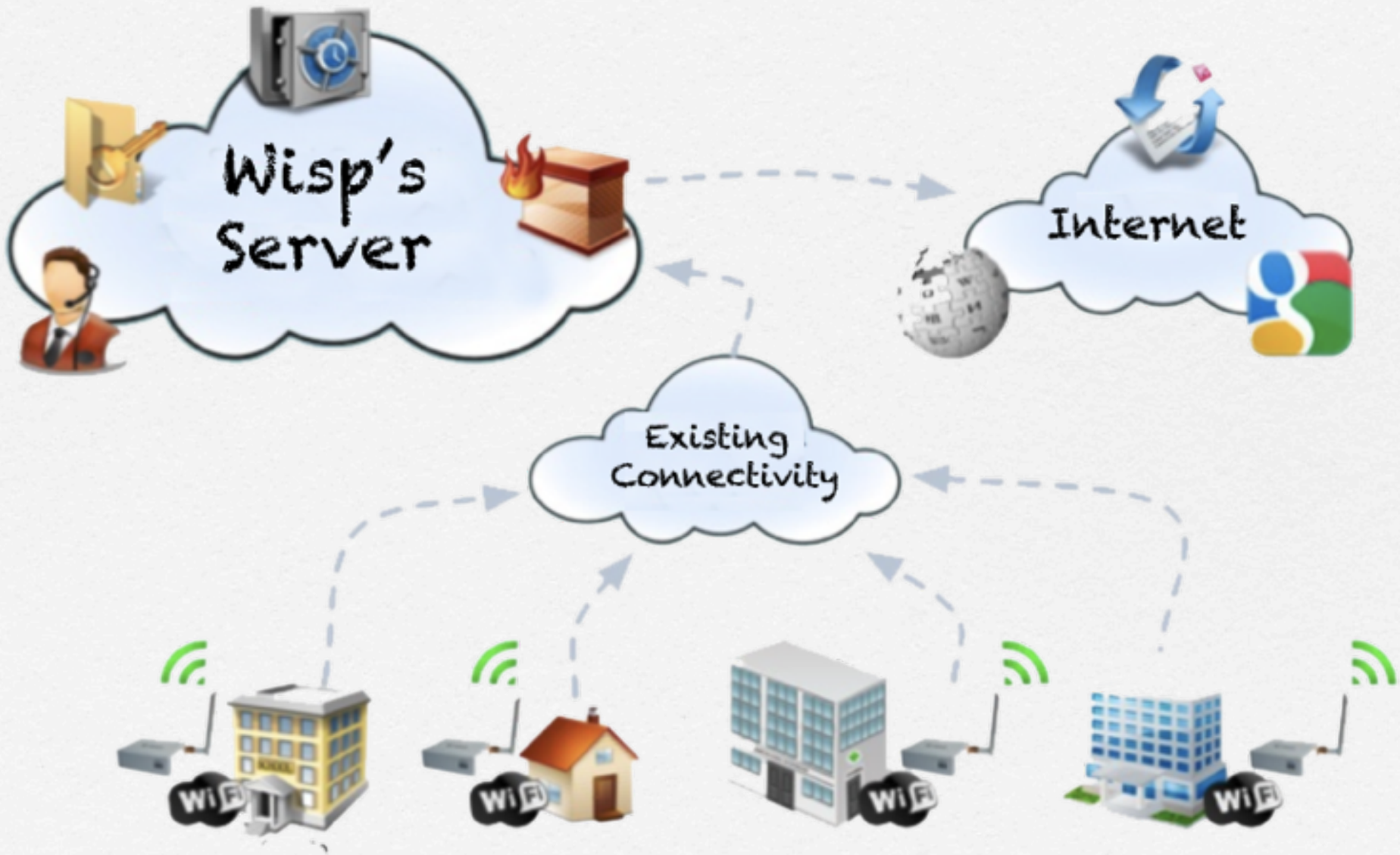
Wi-Fi Coverage for Villa Pallavicini

- [ ] Archeology Museum
- [ ] Botanical garden

Wi-Fi Coverage for Santa Tecla's Fort

- [ ] Santa Tecla's Fort
- [ ] Park of Santa Tecla

Genoa's Wi-Fi Network



The End