

# Smart Library NSK: Prototype of IoT Technology in Libraries

---

Koljenik, Dragana; Čadovska, Ivana; Klarin Zadravec, Sofija; Orešković, Marko

Conference presentation / Izlaganje na skupu

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:203:425226>

Rights / Prava: [Attribution-NoDerivatives 4.0 International/Imenovanje-Bez prerada 4.0 međunarodna](#)

Download date / Datum preuzimanja: **2024-07-08**



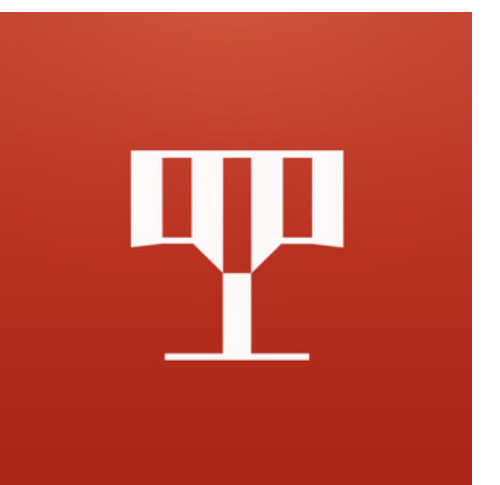
Nacionalna i sveučilišna  
knjižnica u Zagrebu

Repository / Repozitorij:

[National and University Library in Zagreb Repository](#)







# Smart Library NSK

## INTERNET OF THINGS IN LIBRARIES

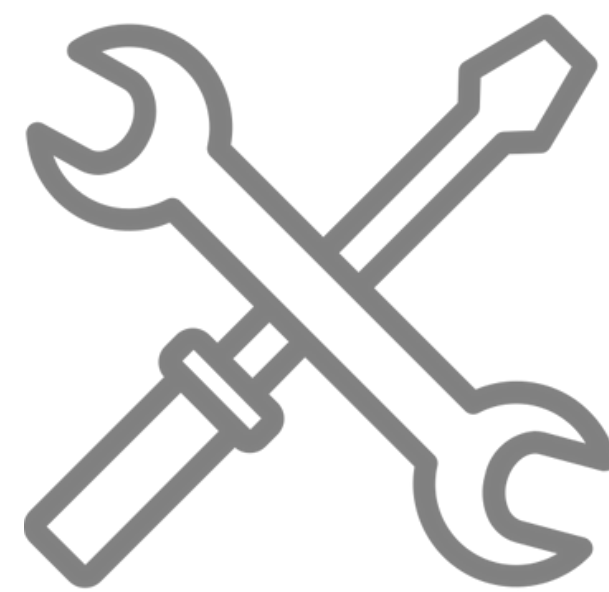
Ivana Čadovska (icadovska@nsk.hr), Dragana Koljenik (dkoljenik@nsk.hr), Sofija Klarin Zadravec (sklarin@nsk.hr), Marko Orešković (moreskovic@nsk.hr)  
National and University Library in Zagreb, Croatia

### User-centered design (UCD)



#### Process

Context of use  
Requirements  
Design solutions  
Evaluation




#### Tools

User personas  
User scenarios  
User stories (journey)

Functionality	Average score	The most common value	Central value
Information about the space and navigation (collections, reading rooms, etc.)	7,48	8	8
Information on how to find and borrow materials (borrowing and navigation instructions)	9	10	9
Library events notifications	6,5	10	7
E-card	7,24	10	8
Application for Evening Work (online form)	8,52	10	10
Borrowing materials (online form)	8,38	10	9
Thematic Search (online form)	8	10	8
Ask a librarian (online form)	7,45	10	7
General information (opening hours, contact)	9	10	10
Reservation of seats in the Reading Room	8	10	9

\*Preliminary research on the NSK mobile app, conducted May 3-5, 2018, NSK users

**Marko M., student**



**Goals or Objectives**

- Easily to reach necessary literature for writing papers, especially for his final paper
- Computer equipment
- Quiet space to work

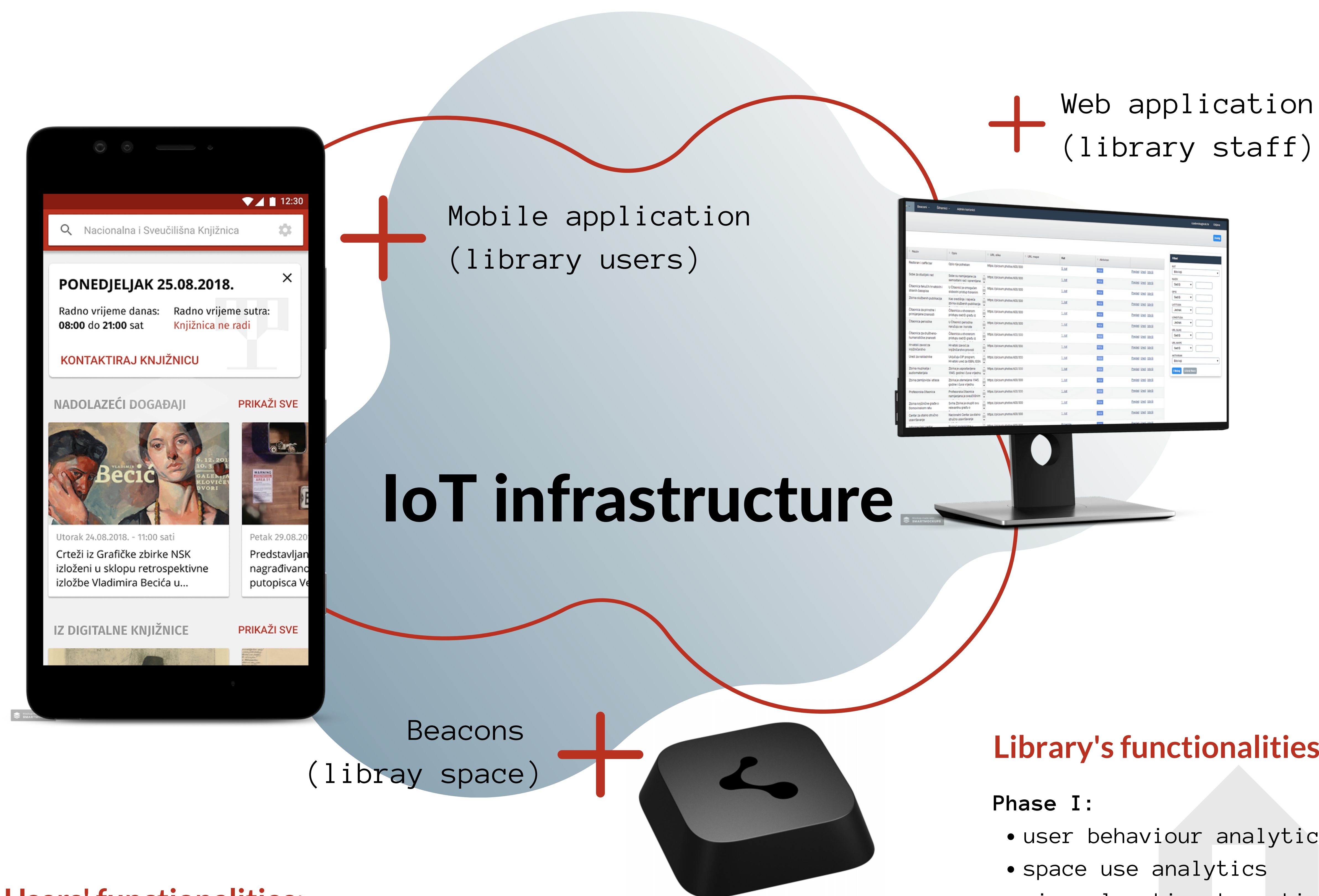
**Biggest Challenges**

- A complicated book ordering process
- A large and unintuitive library space

**Bio**

Marko M. is a BA student of history and philosophy. He lives in Zagreb. He is interested in history and competes with colleagues in local pub quizzes. He handles technology well, especially when it makes life easier and shortens the time in an already overcrowded student schedule. It is not a problem for him to ask for help, but he will always try to solve the problem on his own.

\*User persona example



#### Users' functionalities:

##### Phase I:

- indoor navigation
- contextualization of space
- space-services connection
- factual information (notifications)

##### Phase II

- personalized content delivery
- information on demand
- M-services
- M-payments
- real time and purposeful education
- edutainment

+ Web application (library staff)

+ Mobile application (library users)

+ Beacons (library space)

#### Library's functionalities:

##### Phase I:

- user behaviour analytics
- space use analytics
- micro-location targeting
- real time data
- marketing
- "renting" a part of the system (eg. conferences)

##### Phase II:

- smart building system implementation
- energy optimisation
- security options
- user profiling
- other library systems integration (M-OPAC)