![Interreg Latvija–Lietuva logo. European Regional Development Fund. European Union flag]

"Change for the future – Assessing the Library Services"

Ex-post analyses on the best approaches of the introduction of the self-service solutions and new services in cross border libraries - Jelgava – Liepaja - Siauliai

Project "Self-service libraries for different generations" (LLI-110)

IDEJU
INOVĀCIJU
INSTITŪTS

2019

Table of Contents

1 Introduction and methodology

This analysis has been prepared within the finalization part of the project "Development of innovative library solutions for different generations in the border region" (Self-service libraries for different generations, LLI-110).

The project is implemented by 3 partners – Jelgava City Library, Liepaja Central Scientific Library from Latvia and Siauliai city municipality public library from Lithuania.

The main objective of the project is an improvement of the efficiency of public libraries and the customer-oriented approach in library services assuming the specifics of all generations of customers living in or visiting a cross border (CB) cooperation area of the project. Partnering libraries have agreed to implement the project in order to improve the overall environment and services. The introduction of new and improvement of existing services shall facilitate the personal development, education of different visitors, users and customers of libraries living and visiting Jelgava, Liepaja and Siauliai. In particular, it is expected that people will be able to improve their knowledge in life sciences, foreign languages, technologies and computer literacy, as well as to develop skills of creativity, logical thinking, communication, presentation assuming and benefiting from the generational differences.

The project is implemented through 4 work packages (hereinafter – WP, see picture below. While WP M deal with the coordination and management of the project, the analyses has the main interest about T1 and T2 that deal with the introduction of new and improvement of existing services. Also, WP C is important, in particular, within areas that are related to the communication with target groups about the main results achieved and their involvement in further use of these services.

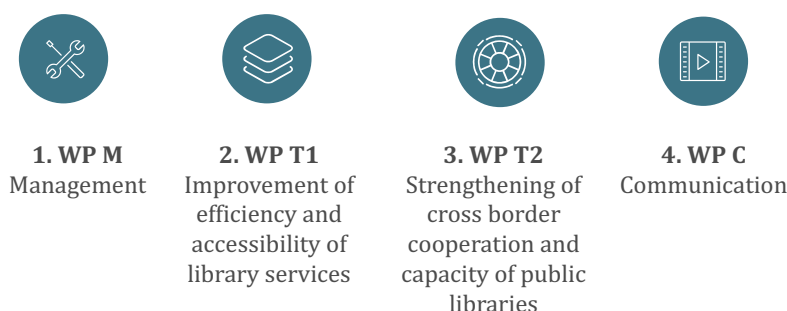| **1. WP M**	**2. WP T1**	**3. WP T2**	**4. WP C**
Management	Improvement of efficiency and accessibility of library services	Strengthening of cross border cooperation and capacity of public libraries	Communication

Figure 1, Work packages of the Project, source: created by authors

The main aim of this analyses is to assess the practices of the introduction of the self-service solutions and new services partnering libraries, as well as to explore good practices and new ideas for further development of self-service

solutions and services of public libraries. The development process of this analyses was based on the following main tasks representing main sections of the evaluation report. First task is forced on the analyses of the existing experience of partnering libraries in developing and introducing new solutions and services, further vision and strategic objectives related to the design of new services, in particular, using and providing self-service solutions. The second task was to analyze and asses the new solutions and services developed and introduced during this project. The third task foresee the collection of the best experience and good practices in the development of new and innovative services in the public libraries, with a special interest to identify the approaches regarding the self-service libraries. The fourth task shall summarize the conclusions, best practices and provide recommendations for further development of new and innovative self- service solutions and services in partnering libraries.
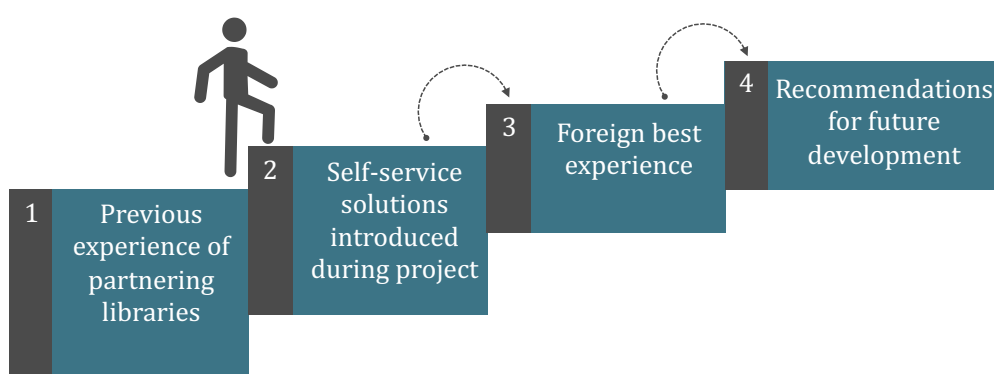

Figure 2, Main tasks of this evaluation, source: created by authors

With regard to the 1st task it is concluded that all partnering libraries has set up a vision to become as a contemporary library that is not just a book depository. These libraries offer modern and innovative services for the benefit of any citizen and visitor of Jelgava, Liepaja and Siauliai. These libraries are willing to understand and respond to the needs of their visitors, users and customers. All of the libraries already have a considerable experience in introduction and adoption of new services for wide range of customers. Also, these libraries are seen and heard widely in Jelgava, Liepaja and Siauliai. All partnering libraries bear important experience to be further shared in between and beyond this partnership. The modern comic room, the stage for the performance, the education programmes, creative and developing events and workshops for different visitor groups and other services form good base for further development and adoption of new modern self-service solutions and services.

With regard to the 2nd task it can be concluded that project was significant for the development of the services of libraries, improving the efficiency and overall working environment in partnering libraries. Introduction and set-up of the RFID system and related services and technologies shall improve the efficiency of the work of librarians and attract new as well as encourage rare users and customer to visit and experience the services of public libraries. Language self-learning systems are seen as one of most important drivers for the attraction of new groups of visitors and

users. These services have been highly appreciated and positively acknowledged by the existing visitors and users of libraries. The deep experience of Siauliai city municipality public library shall be used as the good approach in further development libraries as the core centre motivating and providing opportunities to local citizens to develop foreign languages. Families interact and learn as well as learn from each other are new solutions and approaches that stimulates the intergeneration cooperation which becomes more and more important in future. These services are important tools for involvement of wide target groups to use and experience diverse range of services. These solutions develop good base for local networking and building strong local communities. Also, these solutions challenge librarians to think and develop important future skills necessary for the work in libraries. During different dissemination and experience events other libraries of both countries have already highlighted and positively acknowledged the experience and new approached introduced within partnering libraries that can be further learnt and shared with other libraries.

With regard to 3rd task, it can be concluded that foreign modern libraries are important for local communities. They are present in different fields and in various types of activities, performances. There are wide range of topics and fields served by the public libraries that influence and are related to the everyday life of the local citizens and visitors. The public library become as an important place for work, rest, personal development, care and entertainment of the humans. Public libraries shall keep traditional values and approaches of bringing the importance of books and reading for personal development of people. Also, libraries are becoming as networking, communication, performance, ideation and creation centres for everybody regardless their social, professional and economic background. The public is the place that unites, integrates, encourage and motivate any society member. These areas form the base for further development of the self-service solutions and new services regarding the 4th task of this evaluation. The existing trends and future potential demands of the customers and visitors of libraries start to acknowledge wide opportunities provided by the libraries. The service design of new and innovative services is the integral part of future development of public libraries. User – centred approach in developing and adoption of new solutions and services shall help to respond to the increasing needs of existing and future users and customers of library services. The circular economy, reasonable personal financial management, saving and investments in households, cyber security, well-being of humans, burn-out of workers, robotics, artificial intelligence, 5G, diversity and intercultural communication, gaming as a motivation tool for learning and working are some of trendy topics thinking about the design of new services and the value proposition to users and customers.

The **methodological framework** (see picture below) includes several data gathering and research methods.

Figure 3, Methodological framework applied within this evaluation source: created by authors

The evaluation was started with the kick of meeting with the representatives of the Jelgava City Library. An extensive desk research of the project materials, internal information of partnering libraries, scientific articles, researches and other materials. There were in total 12 interviews conducted with the representatives of the partnering libraries and existing users and customers of public libraries. Based on the desk review qualitative content analyses was done. Two focus group discussion were organised – one with employees and representatives of Jelgava City Library to get the main insight and expectations from this evaluation, to discuss the existing experience and consult on the selection of the case studies. The second focus group discussion was organised in the finalisation part of this study with the employees and representatives of all 3 partnering libraries. Main conclusion and further recommendations were discussed in this focus group discussion. Case studies were used to collect best experience and approaches of partnering and other foreign libraries in developing and adopting self-service solutions and innovative services. Statistical analyses were used to gather and analyse of different statistical data presented in this report.

As regards the limitations, within the project in total 3 strategic documents are prepared – the JCL is the main responsible for the preparation of this analyses. The LCSL is responsible for the development of the further marketing and action plan. The SCMPL is responsible for the preparation of the strategic guidelines for the development of innovative library services. These all 3 documents are interrelated and complements each other. In order not to duplicate, but complement the information about each partnering libraries, each document reflects in more detail the experience and performance of main (commissioning) partner for particular document and shortly reflect on the experience and performance of other partners. Therefore, this study in more details show the information about the JCL.

This study was conducted from July till August 2019. The results are presented and widely discussed in the final conference of the project on 29 August 2019.

Abbreviations and terminology

AI	Artificial Intelligence
JCL	Jelgava City Library
LCSL	Liepaja Central Scientific Library
Partnering libraries	Partner libraries of this project – JCL, LCSL, SCMPL

Project	The project "Development of innovative library solutions for different generations in the border region" (Self-service libraries for different generations, LLI-110)
SCMPL	Siauliai City Municipality Public Library
User	This term is used as the synonym of the visitor or customer of public libraries meaning persons that are using services of libraries

2 Current development of each partnering library

2.1 Description, experience and strategic directions of partnering libraries

In accordance to the strategy of **Jelgava City Library** (JCL), the mission of JCL is to advance intellectual and economic development of the society by providing access to information, ideas and literature independently of environment and borders. The objective of the JCL is to promote educational opportunities, competitiveness in the labour market and spending valuable free time by providing qualitative library and information services to every library user. The development directions and actions of JCL are set in in accordance with the guidelines of the cultural policy of the Republic of Latvia for the period 2014-2020 *Creative Latvia* and the Strategic Part and Action Plan of the Jelgava City Development Programme 2014-2020. The strategic principles of the sustainable development strategy of Latvia 2030 specifies following strategic principles that should be taken into account when considering further development of services of public libraries:

- **Creativity**: it stems from the ability to create new ideas or to link existing ideas and actions in a new way. Innovation must be understood as a strategic principle as widely as possible, resulting in a commercial product or service being the foundation of the future global economy.

- **Tolerance**: this principle includes openness and respect for different cultures and lifestyles, provides for the reduction of all forms of social exclusion and discrimination.

- **Cooperation**: the sustainability model requires an integrated response to economic, environmental and social issues, so both horizontal and vertical cooperation are particularly important.

- **Participation**: active involvement of the public in the policy-making and implementation process.

In accordance to the Jelgava City Library Development Strategy, the strategic objectives of the JCL are as follows:

to become a modern cultural, lifelong learning and information centre attractive for different age groups of library users;

To develop a library as an important community communication centre with an attractive environment that promotes the role of books and encourages the reading as an important tool for the personal development of each person, and in particular, children and young people;

To improve customer services by introducing and developing new services;

To promote the identification, conservation and promotion of the cultural and historical heritage of Jelgava city and surrounding municipalities;

To ensure access to the library for disabled people with special needs;

To promote the further professional growth and development of skills of workforce;

To develop and improve the publicity and communication of the library;

To develop cooperation with other educational and cultural institutions of Jelgava city and surrounding municipalities;

To develop the cooperation and exchange of experience with foreign libraries.

In order to improve the quality of its services, the JCL is actively working on the development and implementation of new local, national and international projects. Through the projects the JCL is aiming to improve the quality of library services; to create a library as more modern and user-friendly, both - in terms of technology and environment; to provide to the audiences of all ages the meaningful, cultural and creative leisure activities; to encourage the development of reading habits and to visit the library and use its services (JCL, 2018).

One of the most important tools introduced so far in the JCL was a SBA module which ensures that user can order and receive a book from all libraries that are in the network of the catalogue. It also helps to reduce queues for the newest books and publications and ensures better turnover of the book stock. This tool works in all four branches of the JCL.

Another new service that has been implemented in the JCL is that users can return the books in any of branches of the library. Users are satisfied with this option and use it frequently. Users as well can order the books remotely and get a notification e-mail or SMS when the order is ready to pick up. This service as well

have improved the efficiency of the library as librarians can work on these orders when there are no other persons in the queue at the desk.

Blind persons can use audiobooks that are available in the JCL. In order to attract more new visitors to the library, it offers to hold wedding ceremonies in its ceremony hall.

On average the JCL implements 12 projects per year. Information about the projects implmented is available on the web page of JCL

Information on THE JPB projects is available at the http://www.jelgavasbiblioteka.lv/par-us/on-us/Project website of the library.

Figure 4, Screenshot from the website/Projects of the JCL, source: www.jelgavasbiblioteka.lv

Below there is an information about the implemented projects by the JCL from 1 January 2017 to August 2019. These project ideas can further facilitate as the inspiration for other libaries and potential areas of cooperation with them.

The Nordplus programme 2018-2022, Nordplus Adult programme 2017

Project "**PUBLIC LIBRARY SERVICES FOR PEOPLE WITH DISABILITIES**" (NPAD-2017/10058)

Partner institution: Utena A. and M. Miskiniai Public Library (Lithuania)

Project main type: Exchange of adult learners

The main objective of the mobility project was to gain new experience from the partner institution (Utena A. and M. Miskiniai Public Library) services and educational activities for people with

disabilities. The knowledge and experience gained from the mobility project is used to improve the future activities and services of the JCL. The exchange program participants from the JCL were visited Utena A. And M. Miskiniai Public Library and get information about Utena Public Library experience how they work with people and organize to them various.

The Nordplus programme 2018-2022, Nordplus Adult programme 2018

Project "**PUBLIC LIBRARIES AS INFORMAL MEDIA LITERACY EDUCATORS**" (NPAD-2018/10120)

Partner institution: Mjölby Public Library (Sweden)

Project main type: Exchange of adult learners

The main objective of the mobility project was to gain new experience from the partner institution (Mjolby public library) about their services and education activities for adults target group. The knowledge and experience gained from the mobility project is used to improve the future activities and services of the JCL.

The Nordplus programme 2018-2022, Nordplus Adult programme 2019

Project "**PROMOTION OF ADULT INFORMATION LITERACY - ICELAND LIBRARIES EXPERIENCE**" (NPAD-2019/10233)

Partner institution: Reykjavik City Library (Iceland)

Project main type: Exchange of adult learners

Duration: June 2019 - August 2020

The aim of the mobility project is to gain new experience about information literacy in Iceland public libraries services and education activities for adults target group. Two staff members of the JCL will visit Reykjavik City Library in order to study the partner institution as a model environment for lifelong learning. The proposed information and notes will be passed on to the colleagues in Jelgava libraries and implemented into the future adult non formal education activities and services. The project is viewed as a starting point for future cooperation between the organization involved in the project – the JCL and Reykjavík City Library. The new experience proposed in the mobility project will be incorporated into the future informal education activities carried out by the JCL

Erasmus + Programme Learning Mobility of Individuals

Project "**YOUTH IS STRANGER THAN FICTION**"

Partners: Siauliai County Poville Visinski Public Library, Tallinn Central Library

Duration: August 2019 - September 2020

The issue the project aims to address that the libraries have to contribute to the growth of education amongst, enhance development and take part in positive youth development, however, librarians do not have the crucial knowledge and qualification in the field of youth. Thus the aim of the project is to provide librarians with the necessary knowledge in how to engage, information and work with youth in terms of informal education and overarching perception of the field. The main activity of the project is a Training course - designed for librarians at all levels of engagement with youth.

Erasmus + Programme of the European Union, Strategic partner ships

The **DAILY INNOVATORS AND DAILY EDUCATORS IN THE LIBRARY**

Duration: September 2015 - August 2018

Key project activities:

1. Preparation of the report "Educational experiments in the European libraries", analysing the hitherto education projects run by the libraries from the countries participating in the project and best practicalities from all around the world.

2. The representatives of project partnership will take part in 4 teaching & training events (in Poland, Norway, Lithuania & Latvia) which will give them a better insight into the library specifics and adult in the participating countries.

3. Elaboration of the set of educational materials for librarians and other local cultural educators consisting of: multicultural, innovative & creative (MIC) library model, materials for self-directed learning, scenarios of activities for adult users.

4. Organisation of series of 4 national seminars (in Poland, Latvia, Lithuania & Norway) and 3 international conferences (in Poland, Lithuania & Latvia) disseminating the intellectual outputs prepared within the project.

Erasmus + Programme of the European Union, Strategic partner ships

Project "**Youth Work HD**"

Project gives an answer to the needs of youth that aren't covered at the moment in the countries involved in project (Croatia, Italy, Latvia and Lithuania), but also in most European countries. Partners involved in this project worked on promising many open European questions - from digital literacy, youth unemployment and digital innovation to standardization of youth work. We have recognized general skills and knowledges that could help to set standards among different of youth workers in Europe.

As can be seen, international projects at the JCL focus mainly on improving the knowledge of the staff, acquiring new experience, developing cooperation, which are essential factors for developing the library in a wide range of directions.

The staff of the library is really important in the further development of the library as an institution. The staff of the JCL are actively engaged as volunteers in testing materials for various projects in such having the possibility to develop their professionallity. This allows to keep up with the actual tendencies, acquire new theoretical and practical knowledge that can be useful for the realisation of the main job.

The mission of the **Liepaja Central Scientific Library** (LCSL) is to develop the services and availability, increase the quality of life of local citizens un increase the usage of creative cultural and science materials for the growth of Liepaja and Latvia.

The objective of the LCSL is to contribute to personal development and growth of the any society member by being qualitative and accessible centre of information, knowledge and culture. The LCSL is aiming to increase the number of visitors by at least 10% till 2022.

The LCSL act as the regional library meaning that it is a methodical centre not only for 5 branch of the LCSL, but also for more than 40 libraries and 2 customer service points of the surrounding municipalities.

The LCSL acts not only as the largest information, cultural and lifelong learning centre, but also ensures the storage of printed publications from 16th century. The LCSL is a part of the Light Network (*"Gaismas tīkls"*) that provides the possibility for citizens to access the electronic catalogues and other digitised information available from any place. This network allows the exchange of book by public libraries on the demand of users.

The LCSL is seen as an important part of the cultural and educational activities of the local, national and international scale through implementation of different projects, events and activities. Poetry Days, Library Week, Digital Week,

Nordic Literature Week, Museums Night, Produced in Liepaja are some of events were the LCSL is actively participating and organising.

For more than 10 years the LCSL acts as the regional training centre. The strategic objective of this centre is a smart and knowledgeable librarian who is willing to transfer his knowledge and skills to users. This centre has become as a lifelong learning centre for librarians, other library professionals and citizens of Liepaja City and surrounding municipalities, including employees of other cultural institutions, teaching staff of education institutions, students and other library users.

As regards in projects, the LCSL has previous experience in the implementation of RFID system in two main reading rooms of the library.

Figure 5, Screenshot from the website of the LCSL, source: **www.liepajasczb.lv/lv/**

Both the JCL and the LCSL also gives an opportunity to use international scientific databases, like EBSCO, Web of Science, Scopus, BRITANNICA as well as local database LETONIKA.

In accordance to the strategy of the **Siauliai City Municipality Public Library** (SCMPL), the vision of the SCMPL is to become a modern and contemporary library that meets the needs of the community. The mission of the SCMPL is to meet the community's information needs, collect, handle and store all information of cultural and historical significance, and make it available to the society.

The SCMPL have three strategic directions set by the Lithuanian Ministry of Education for 2016-2022:

- First strategic direction: Libraries for public learning. Its purpose is to strengthen libraries' cultural and informational competences and literacy development activities that promote creativity, socio-economic activity and motivation of the public to participate in lifelong learning.

- Second strategic direction: Libraries for socio-economic well-being. Its aim is to strengthen library communities by leveraging libraries' infrastructure and developing new e-services to foster socio-economic development based on knowledge, entrepreneurship and innovation.
- Third strategic direction: development of the library in accordance with the principles of efficient management and public needs. Its purpose is to improve library management on the basis of efficient and effective implementation of activities, systematic development of staff competencies and performance evaluation.

Strategic Development Plan of Siauliai City 2015-2024 (approved by the decision No. T - 325 of 25 August 2016 of Siauliai City Municipality Council) "Siauliai - Sun City: Open, Lively and Safe" sets three main priorities of action:

- The strategic objective of the 1st Priority is to develop an innovative educational and cultural system that fosters an active and creative personality. To achieve this goal, a task has been set - to develop cultural services of different spectrum, exploiting the potential of the region and the metropolitan city;
- The strategic goal of 2nd Priority "Active, curious, reading people of all ages" focus on the schoolchildren, parents with children and seniors of Siauliai spending leisure time in the SCMPL. The task of this priority is to attract, and satisfy the educational needs of the modern society, which currently is done through such services as the Family Space and the Comic Centre.
- The strategic objective of the 3rd priority "Safe - "Nature friendly, high quality living environment" is to develop and foster a living and public environment that is attractive to live, work, improve. The task of this priority is to increase the energy efficiency of the buildings of cultural institutions.

The SCMPL actively implement projects in order to improve its services and environment. In 2008 the SCMPL joined the project "Libraries for Innovation" ensuring the training of the computer literacy to local citizens and creating public internet access points. The SCMPL has created an external book return facility, facilities for the handicraft activities of seniors, activities for whole family and other.
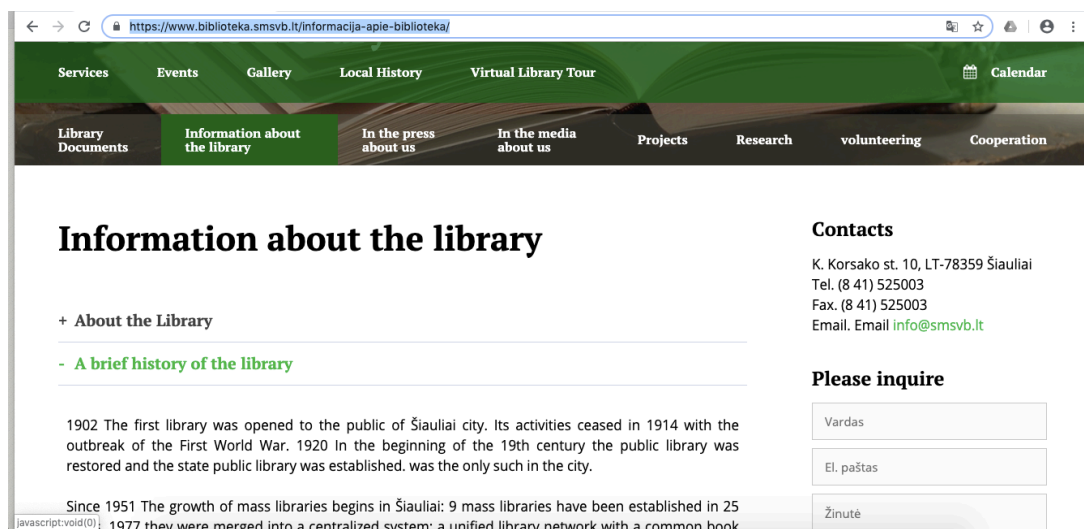

Figure 6, Screenshot from the website of the SCMPL, source: **www.biblioteka.smsvb.lt/**

The SCMPL after first experience exchange visits to Telsai library and libraries of Helsinki has also started to develop new projects aiming at implementation of RFID system in their library branches. The set-up of this system is already planned in nearest years.

The overall objectives of public libraries are to provide access to information irrespective of their form, format and location. Public libraries act in accordance to the local, national and international laws regarding the public libraries and planning documents in the framework of the culture policy.

The guidelines of International Federation of Library Associations and Institutions/United Nations Educational, Scientific and Cultural Organization (IFLA/UNESCO) set the aim of public libraries to build and strengthen favourable infrastructure and promote innovation by providing a diverse supply of resources and services to every member of society.

In today's information society, there is a **rapid change in the paradigm of tasks of public libraries**, which goes along with the future prospects of libraries. The changing environment impacts libraries and the services of public libraries cover more and more areas and new tasks.

The performance of libraries show that libraries are implementing new and innovative services in order to keep and increase their competitiveness comparing to new attractions, gadgets and technologies appearing. The real and symbolic value of public libraries remains consistently high. Public libraries have a number of new opportunities for further development in different fields.

The growing needs and demands of the society stimulate further development of the library and increases its contribution and the value proposition to society. The cooperation at a local, national, cross-border and international level allows the extension of horizons, generation of new ideas and solutions promoting the awareness and the significance of the libraries and interest of people to use the services of libraries.

There are following main **development needs** of partnering libraries:

Building new local and international cooperation and communication networks: sharing experience, acquiring new ideas and knowledge is a value that enables each institution and organisation to reach new development levels and tend to excellence.

Increasing the qualification, knowledge and competence of the staff of libraries is an endless process, following trends and a shift of paradigms at professional level and technological developments.

It is essential to ensure that staff of the libraries are knowledgeable and competent to provide the library services and encourage the willingness to visit the library, thereby increasing the level of trust in the excellence of public libraries by their users.

The library is open to everyone: developing and improving library services and the environment for any community group, including people with special needs.

Involvement of volunteers in the library work - Voluntary work is a world-wide recognised way for citizens to engage in public developments, transform and improve their quality of life and address human, social and environmental issues, challenges and problems. This is a great way to get closer to the target groups and the potential audience of libraries.

Development of new and innovative services going far beyond the books. Libraries are becoming as the "avatars" being able to respond and serve the needs of local society and visitors of municipalities. Libraries shall follow the modern trends and apply the user – centred approach in the design of new services.

These services ensure personal development, entertainment, work, information, communication, care and well-being of people regardless of their professional, social and economic status and background.

2.2 Profile of existing and potential libraries' visitors and their needs

We have analysed and included in this study the data about the physical and virtual visits and number of users of library service in each library. As libraries use different indicators and methods of the calculation, they are not always comparable, but are included in this report as reflect important statistics and information.

Main indicators regarding the number of visitors of the JCL are presented below in the table.

Table 1, Indicators of the JCL (incl. the branch "Zinite"), source: the JCL

Indicator	2016	2017	2018
Total number of readers in Jelgava City Library and Branch children's library "Zinitis"	8060	7940	8128
Total Visits	81221	74581	87451
Service	151724	147112	155987
Urban population (PLMP data)	61304	61183	60941
Library visitors in% of the population	13,2%	13%	13,3%
Remote connections in www.jelgavasbiblioteka.lv	54869	52737	56 326
JCL social network visits (draugiem.lv, facebook, twitter)	271483	281000	274 119

Main indicators regarding the performance of the LCSL has been mainly decreasing in the last few years (see table below).

Table 2, Indicators of the LCSL, source the LCSL

Liepāja Library	2016	2017	2018	% change compared to prev. year	
				2017	2018
Number of users - kids	5651	5607	5591	-0.78%	-0.29%
Number of users - others	9196	9128	8672	-0.74%	-5.00%
Total number of users	**14847**	**14735**	**14263**	**-0.75%**	**-3.20%**
Physical attendance - kids	40427	35713	36296	-11.66%	1.63%
Physical attendance - other	135640	137421	132196	1.31%	-3.80%
Virtual attendance	74296	47290	42331	-36.35%	-10.49%
Total attendance	**250363**	**220424**	**210823**	**-11.96%**	**-4.36%**
Give-out books	219308	205911	198132	-6.11%	-3.78%
Give-out periodicals	206416	190386	187204	-7.77%	-1.67%
Total give-out	**425724**	**396297**	**385336**	**-6.91%**	**-2.77%**
Users, % part of the local population	21.02%	21.22%	20.64%	0.95%	-2.73%

Challenges of the LCSL that mainly have caused the decrease of performance indicators are related to the overall decrease of the socially active part of local inhabitants. Also following reason has implication on the decreasing numbers:

1. Increase of the role of internet in the search of information;
2. Variety of culture and art events in the city;
3. Literature has a good availability in local bookstores;
4. The most demanded books are not enough in the stock of the library;
5. Not enough resources for buying new books.

There are four most common **existing visitors or users** within partnering libraries: (1) Seniors, (2) Young families or mothers with their small children, (3) students, (4) pupils or school children.

The picture below shows prototypes or profiles of most typical existing visitor of library from each of the group of library visitors mentioned below. These prototypes demonstrate and describe main behavioural patterns of each of this customer group.

Viktoria, retired, age: 69
- Read books and periodicals
- Regularly call through skype to granddaughter that live in UK
- Learn English as granddaughter mostly speak in English
- Hobbies: gardening and traveling (to UK)
- Come to library with her grandson

Ilona, mommy with small children, age: 32,
- Come to library with her kids
- Together with kids read books for children and play games
- Occasionally participate in "family events" organized by libraries
- Hobbies: healthy food, "green" lifestyle, recycling and "0" waste

Kristofers, student, age: 22,
- Search for a special literature and writing a thesis for studies
- Occupied with some freelance work in organizing events
- Hobbies: playing guitar, 3D, artificial intelligence and robotics

Karolina, pupil, age: 11
- Come to library after a school
- Use computer for leisure activities
- Read school compulsory literature and youth "bestsellers"
- Hobbies: TV shows & serials, beauty care

Figure 7, Prototypes or profiles of existing visitor types, source: created by authors

Young families, especially new moms, or grandparents with children consider the library as a place where to spend a qualitative free time with small kids. Partnering libraries has created specific family or children corner providing opportunities to read books for kids and to play games. Also specifically targeted events for kids and their families are appreciated by these visitors.

Besides the interest in the literature and books, **seniors** are interested to learn and use ICT technologies. The partner regions are characterised by the fact that citizens have emigrated for life and work abroad. In order to be able to communicate with children and grandchildren living abroad, seniors are interested to use the library for acquiring computer literacy skills. Also, the development of different e-services is currently forcing seniors to learn computer skills in order to be able use such services as internet banks, e-public services or other.

Children or pupils tend to spend their free time from school in the library. In Siauliai several branches of the library are in the same building as a local school which is seen as an important positive factor that encourage for attraction of school children. Also, it is a positive factor that all libraries cooperate with kindergartens and often kindergartens organise groups of pre-school children to visit library and spend some interesting and educative time there.

Students go to the library to search for specific literature and information in order to work on their high school/university research works. All partnering libraries are located in the cities that are considered as important development centres with universities located there.

There are some groups that are rare visitors in the partnering libraries. There are 3 groups of potential future visitors of libraries identified: (1) professionals, managers, entrepreneurs; (2) unemployed persons; (3) organised groups of pupils/ children from schools. All partnering libraries would like to attract more and engage these potential visitors to use library services.

Active, working age people - **professionals, managers and entrepreneurs** - one of the potential reasons why they are not now among popular groups of visitors is that libraries where traditional and slow in their provision of services. This group of library visitors usually associates public libraries with the place or an organisation which stores and issues books for reading. In most cases this group is not familiar with other modern solutions and services provided by the libraries. The prototype or profile of customers of this group are shown and described below.

- Busy with the day-to-day work rush and in day-to-day work use computer and other smart technologies
- Actively use social media (24/7) un use to work from the distance (smart work)
- **Search for** mindfulness**,** work-life balance and improvement of personal, and business efficiency
- **Interested in** new trends related to the business, innovations, management, new technologies
- **Books:** they have their personal collection of books (bestsellers and field literature) or listen audio books during driving
- **Improve their mastery** in their professional field - learn, read and extend the network
- Holidays spend with their **family** in exciting attractions or in outdoor activities, they are keen to charity
- Considering about the revision of their personal collection of books (at home) as they lack an empty space in shelf for new books
- **Hobbies**: skiing, joga, traveling, cinema, tasty meal in well-recognized restaurants and cafes

Ieva, Director of the department, age: 40

Aldis, Entrepreneur, age: 52

Figure 8, Prototype or profile of potential visitor types, source: created by authors

This group rarely visit libraries, due to the busy working days and general rush in their life. This group of potential visitors prefers to buy printed books by their own or reads on-line books. This group does not like to wait while served (to receive or hand in a book) by the librarians in case they are busy with other library visitors. They would rather prefer to find particular book within the on-line catalogue and use all service by themselves without the involvement of the librarian (self-service) during their visit to library.

Also, the availability and accessibility of a library outside the traditional working hours is essential for this group. This group of visitors are interested in fast, flexible and "on-demand" library services in 24/7[1] regime, meaning possibility to receive services immediately on the demand with a tap of button. This is named as well as the gratification economy or "uber x phenomena"[2]. "Uber x phenomena" is seeking for the service industries that could use the business model or approach of uber, ensuring ordering of services and other communication with customers through smart phone[3] in a real time.

This group of visitors follow actual trends. One of potential topics that could be incorporated in the offer and services of libraries for the professionals, managers and entrepreneurs is related with the concept and values of the circular economy, and circular business models, "3R+" principles of the circular economy (see picture below) are seen as current discussion trend among the entrepreneurs, managers, practitioners and policy makers. Entrepreneurs and managers lack the information about the circular economy. This topic has been announced in between of some priorities of EU funds support beyond 2020.

---

[1] 24/7 – 24 hours a day and 7 days in a week
[2] https://stfalcon.com/en/blog/post/7-industries-where-Uber-for-X-flourishes
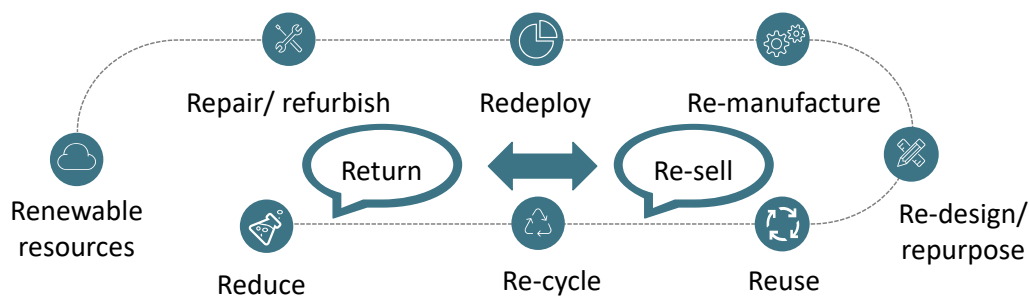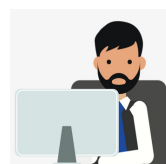[3] https://www.theatlantic.com/technology/archive/2019/03/what-happened-uber-x-companies/584236/

Figure 9, 3R+ principles of the circular economy business models, source: created by authors based on the literature review

Unemployed persons, (in particular aged 50+) are looking for employment opportunities or work on self-development to be more competitive in labor market. They visit library to search for job advertisements within internet, they use computer to prepare CV and a motivation letter in order to apply for vacancies. They are less interested within the available literature and books. The prototype or profile of customer of this group is shown and described below.

- Read periodicals, job ads and other useful information
- Use computer in a library for daily news and for e-serves (i-bank)
- Has seasonal employment
- Hobby: sports

Figure 10, Prototype or profile of potential visitor types, source: created by authors

These customers would be interested to learn new skills, knowledge and foreign language which would help them to increase the competitiveness in the labour market.

Also, availability and possibility to access and use different public e-services is important for these customers. Currently number of social and other public services for unemployed persons is provided through e-platforms and databases. As for instance, latvija.lv is national platform commissioned and developed by the public authorities of Latvia in order to deliver diverse range of public services.

Some of unemployed persons would be interested to develop their own business ideas. Possibility to use computer for the development of a business plan or a project would be an interest of this group in order to apply for the seed or start-up funding for their business idea. Also, other activities that promote and engage these persons towards the starting their own business, for instance - networking possibilities with other business start-ups and existing entrepreneurs, creative workshops about the development of innovations, design thinking, promoting sales skills and other.

Groups from schools - one of the potential reasons why groups from schools is not now among popular groups of visitors is low capacity of librarians to take these groups and organize them valuable and educational tours and events in the library. Organisation of events for pupils is time and resource consuming, and

librarians are occupied with serving existing visitors, thus they are not able to devote their time and work for developing new ideas and organising events for pupils.

Although the picture below presents the **actual topics** to be further acknowledged by the school children, these issues are common and important as well for families with kids. Large part of our society (Generation X, Y, Z), has grown up with no previous experience (especially during Soviet times) and knowledge in the family how cleverly or reasonably spend or invest earnings. This concept includes several subtopics, like, the examples and concept of passive income, difference between savings and investments. Where and how to invest money.
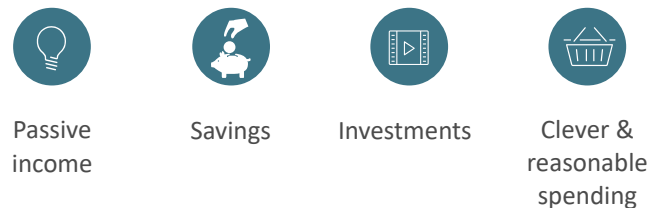

Passive income   Savings   Investments   Clever & reasonable spending

Figure 11, Fields/ topics of potential interest of groups of children, source: created by authors

The picture below presents other actual or trendy topics, that would raise an interest not just for managers, entrepreneurs and professionals (1st group of potential visitors), but as well to other groups of exiting visitors. Safety or cyber security is an extremely actual topic for those that are important to all generations regardless of their professional background, occupation and other statuses. Researches and recent activities of different organisations proof that comparatively large part of our society is not considering or rarely read terms and conditions issued by different webpage administrators. Society members have unserious attitude towards the safe storage of passwords and other important information regarding our personal identity. Children grow up as "digital natives", but their parents lack skills how to properly teach their kids on the safety aspects being and using internet opportunities. This topic raises a lot of

(1) Be safe in internet
Cybersecurity startig from kindergarden

(3) Design thinking
Idea management
Functional design

(5) Work – life balance
Burn-out – managers, entrepreneurs

(7) Live agelessly
Generational differences & cooperation

(2) Artificial intelligence & 5G
Augmented reality

(4) Vizual facilitation,
presentation, moderation

(6) Healthy life-style
Bio - hacking

(8) Senior University
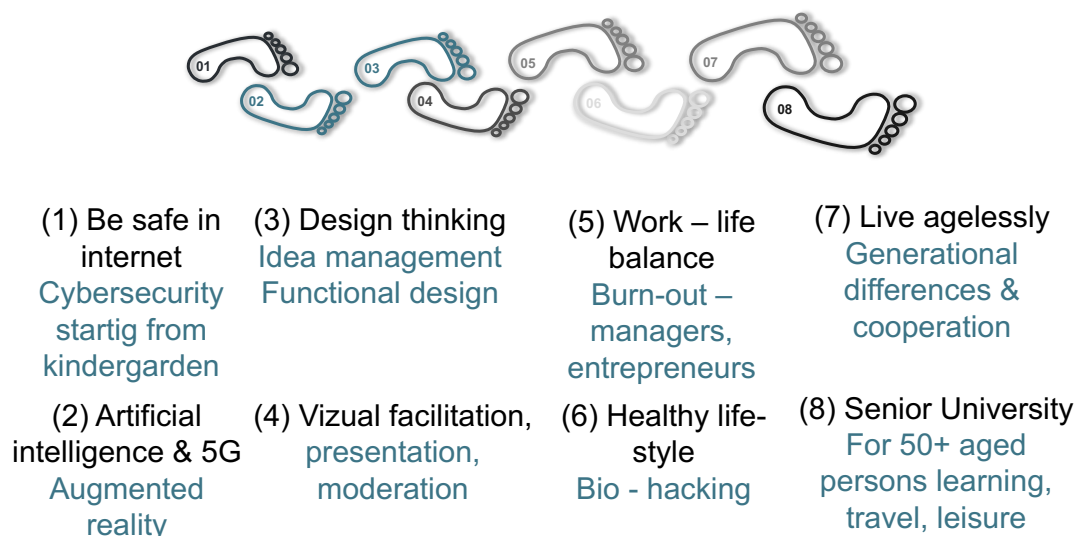For 50+ aged persons learning, travel, leisure

Figure 12, Other contemporary and trendy topics to be incorporated in library services, source: created by authors based on the literature review

Design thinking become visible in our daily life. Design thinking help to entrepreneurs better formulate the value proposition, where the functional use or design is a it. User centred approach in designing services is one of trends how entrepreneurs can attract and encourage users to try the services offered.

Visual facilitation, visual presentation and visual moderation are an important tool and become more actual in famous events, seminars and conferences. The society has a new obsession related to the healthy lifestyle and living agelessly. Tools and tricks and another user information regarding such mindset is demanded.

The burn-out of employees, managers and specialists is extremely popular problem for the society. The work-life balance similarly like a circular economy, attract attention from practitioners that are tired of the daily rush in the work.

Senior university is comparatively new trend earlier developed in Lithuania and just recently launched in Latvia. Seniors want to be active also in "retirement" time and communicate with their peers. Seniors have acknowledged that it is really interesting and trendy to learn together with and meet other peers in almost the same age. By networking and coming together start learning activities.

Summarising, **the main challenge** of the public libraries at present is, how to adapt the services offered to different generations of customers which demand methods and services that correspond to their individual technological development and needs. Being in limited financial and human resources, the libraries have to find ways to diversify their services and to serve their customers with different methods, that fit their needs.

The number of visitors across Jelgava, Liepaja and Siauliai public libraries varies from 300 to more than 600 visitors per day, and any of libraries have their objective to continue to increase these numbers even more. This creates the collective challenge of libraries – how to ensure effective and quality service for increasing number of users with limited resources.

Children are the second largest visitor group at the library, comprising 39-46% of all visitors. Most often children visit the library for fun, not for reading books or for seeking other information for self-improvement. In this context libraries face the challenge to find ways to catch the interest of kids in reading and personal skills' development. Libraries need to provide an interesting and latest technologies filled spaces, that in the same time will be motivational to use and contains reading and/or personal development features.

3 Self-service solutions and approaches introduced in partnering libraries

3.1 Self-service solutions and new services introduced during the project

There are four main groups of services introduced during the project (see picture below).

RFID technologies
- Security Gates
- Self-check
- Check-in/ out workstation
- Digial Library Assistant
- Book drop (box)

Language Self-Learning System
- Seniors learn languages to communicate with their grandchildren born & living abroad
- Cooperation with "Seniors' University"

Families interact & learn
- Parents teach children new habbits to visit libraries nad read books
- Families spend in library qualitative time together playing interactive & table games
- Family days is networking of different families

Learn from each other
- Volunteers involved in libraries
- Volunteers teach seniors in IT
- Volunteers organize creative and developing workshops for children
- Foreign volunteers teach language

Figure 13, Groups of services developed and implemented during the project, source: created by authors

Libraries are now more than ever, increasingly depending on technologies to continue on their efforts to provide better and effective services at minimum cost to their users. That is the main reason why Jelgava City Library has upgraded its library services through the Interreg project and introducing library self-service system.

Library self-service system includes different technologies as a unqualified system - selfCheck, RFID security gates, RFID boog tag, video surveillance system, Digital Library Assistant, RFID workstation, various system software bookdrop (book return box).

WHAT is RFID (radio frequency identification) technology?

RFID is a proven technology that allows for item identification in addition to item security. That means that in addition to secured RFID tag alarming RFID security gates; the item's title, the gate corridor and other information is instantly available at a designated staff station. RFID technology is also used for checking items in and out of a library, collection inventory and accurate shelving, as well as holdings pick-ups that are covered throughout the community. RFID automated material handling systems can also accelerate the process of processing CD, DVDs and books to library shelves faster (Bibliotheca, n.d.).

RFID allows the visitors and users by themselves to develop and manage their library account, to complete the borrowing and return process through it. Self-service terminal provides virtual access to the library resources, allows not only to order publications, but also to extend borrowing time if needed. In addition, this terminal helps to better serve those clients, that are being in hurry and willing just to take or hand in books. Library visitors/ users will be able to do it by their own without waiting when librarians can serve them. In the future, safe payment systems can be

integrated into self-service terminal which would extend possibilities of the terminal – library visitors could pay for the library services. Library can advertise new or preferred services through the self-service terminal. <u>Service has been introduced in Jelgava.</u> Following the positive experience of partnering libraries, library of Siauliai are also planning to introduce such self service terminals in further development projects.

RFID security gates - The main function of the security gate is to trigger an alarm when any library is taken out through these gates without checking out on Library Management Software. This is function is not limited to only triggering an alarm, but it can be extended to the following:

- It identifies which item has been taken out of through the security rules. It will show either the accession number of the item or the title of the item which is taken out without checkout. This identification can be monitored on any designated computer in the library
- It can be connected to Magnetic door lock, so that moment the item is taken out through the security gate without checkout, it will also lock the door.
- It can be connected to the Camera, so it will also take the photo of the person taking out the item without authorization.
- It's allows to keep the count of the people entering and leaving the gate.

Security gates protect the most important property – the books. Upon implementation of self-service systems, the library staff participate less and less in the process of issuing and returning books, thus it is less controlled. Security gates prevent accidental, as well as intentional theft of publications, thus librarians are not supposed to guard the recourses of the libraries. Special markers/stickers are attached to publications, which are detected by the security gates. If someone attempts to pass the security gates with a publication that was not registered as issued in the system, the gates alarm the staff. <u>Service has been introduced in Jelgava and Liepāja</u>. Following the positive experience of partnering libraries, library of Siauliai is also introducing such gates in another development project.

RFID selfcheck - It conveniently allows users to issue and receive books and other items (such as films, games and CDs), extend reading deadlines on their library account for themselves without librarian participation. Selfcheck allows librarians to continually evolve new service to the community and focus on more meaningful interactions.

RFID workstation – the RFID workstation is intendent for use by library staff to check-in and checkout library materials. Designed for use with a customer-supplied library materials, barcode scanner and memory card drive.

RFID book tag - an RFID tag typically comprises a micro-chip and an antenna. The whole device (including the chip) is packed as a paper-thin adhesive label which may come in a variety of shapes and sizes appropriate to the labelling of books, videos, DVDs and CDs. This RFID tag can be applied to library resources in various ways to improve both stock management and security.

Digital Library Assistant - device allows library staff to quickly and easily conduct item inventory tasks, such as checking the shelf order, identifying misitems and finding specific items within the library stock.

Bookdrop (book return box) - it allows books to be returned at any time, even outside normal library opening hour. Improving customer service and allowing library staff to get on with other tasks within the library. This box is standing outside the building and is accessible 24/7. Such box makes library more available as clients can return books any time it is convenient for them. Additional benefit for users is that they can spend less time, as there is no need to stand in a queue. Such box also improves the efficiency of librarians, as they can sort brought books in times when there are no clients at the desk, so the workload becomes smoother. Service has been introduced in Jelgava. Liepāja and Siauliai libraries consider this as a good experience and would like to introduce in their libraries as well.

Jelgava City Library (JCL) has developed and upgraded activities for children through the purchase of interactive stand/table and developing an interactive game.
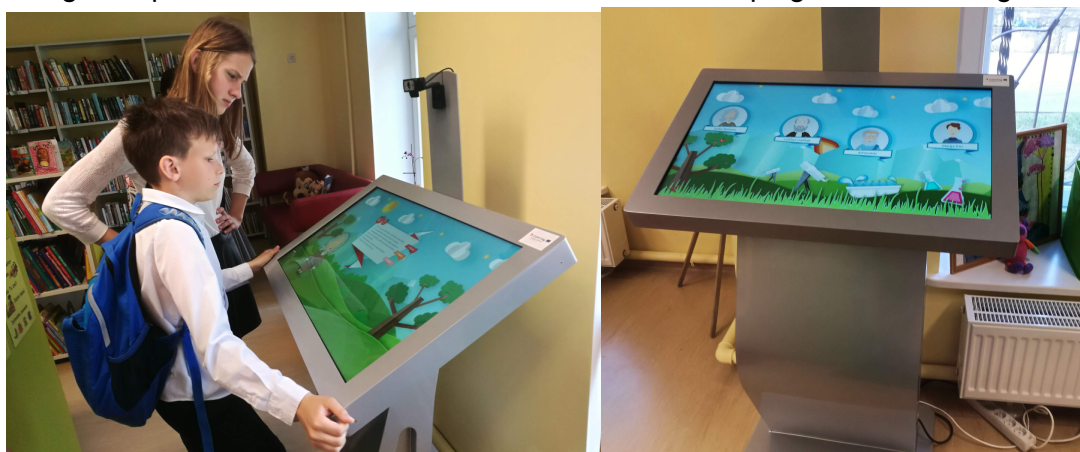

Figure 14, Photos of the interactive games, source: the JCL

An interactive game in science - the interactive game is foreseen as a self-learning tool. It is software with different tasks for life sciences and mathematics.

Isaac Newton's game consists of three smaller games dealing with three Newton Laws and in a creative way develop particular knowledge of children:

▪ The first law of Newton, or the rule of inertia – the course of the game, the player must move an apple standing on the table so that it stops as close as possible to the target circle. The closer the apple stops to the circle, the more points the player gets. So, in this game, the player must be able to assess his applied strength so that the apple is not "pushed" too weak or, on the contrary, too strong.

▪ Second Newton Law – In the course of the game, the player must place individual items in their intended place, taking into account the weight, distance and direction of the object where the object is to be placed. If appropriate indicators are selected, the object will enter the desired location if the required parameters are not selected precisely.

▪ The third law of Newton – two scientists who have been on skateboards have been shown in the course of the game, the player must choose the

right use of force so that the two scientists move out of their places, running in the centre and then getting back to each of their starting points.

In the **Galileo Galilei game**, the goal is to answer the question – how the bodies fall! Referring to Galileo Galileo Galileo's conclusions and experiments that:

- The rate of fall of the bodies is independent of mass;
- The movement of falling bodies is an overstated movement;
- The height of fall is proportional to the square of the fall time.

The course of the game – Galileo Galileo Galileo is on the Pisa tower and it has several pairs of objects next to him, the task of the player is to help the scientist determine which of the objects in each pair will fall off the roof of the building sooner. For pairs of objects, you must specify material, weight, shape.

The Arhimeda game (Arhimeda Law) is shown in the game. The main Arhimeda stands on the shore of Lielupe and several objects are placed next to him, depending on the shape of the object, etc., and it should be determined, according to the laws of physics, that it will swim or sink.

In **Maria Sklodovska-Curie game**, the player can learn more about x-rays. There are several items and an X-ray machine in the room, with the player selecting each item to answer the question whether it will be visible in the X-ray machine. Once a player has made his choice, the object goes to the tape where it goes to the X-ray device and is either visible or not seen in the X-ray machine, respectively. Organic matter and **very small objects cannot be seen in the X-ray.**

Interactive table for use of various games and software. The library uses this interactive desk to create its own educational games, such as "Get to know your library". In this way, children learn about library services in an interesting and appealing way.

Project partners have introduced new approaches within the project:

"Families interact and learn". As part of this approach, JCL children of different ages and their parents may participate in various educational activities.

The Family space is an interactive and physical environment, dedicated for families to spend time together and learn. This space is used for introduction of the new method "Families interact and learn". Families learn and improve various skills – creativity, logical, strategical and model thinking, communication skills, improve relationships with other members of the family etc. This is a new service for the library and by offering different additional services libraries attract new visitors that my turn into new users. These kind of "Family Spaces" are common in libraries of Finland, which was observed during the experience exchange trip of librarians to this country. Service introduced in Siaulai, and to lesser extent also in Jelgava and Liepāja, as these libraries also bought board games and developed interactive game, which can be played/used together with families.

Informative educational workshops for families "The Owlet School", that is a training for 3 years old kids and their parents. The Owlet school - is a motivator that promotes interest about books and reading, self-learning, making new friends, tuying free time, creating a favorable environment to encourage children to become and competent people. It should be emphasised that visitors of the younger generation are both future readers of the society and the future of urban culture, education and science. Every year JCL and its branch libraries offer for everyone three-year-old child and his parents to attend these events for free.

Informative educational workshops for families "Get to Know your Library" that are aimed at making children and their parents interested in visiting the library, to enhance reading pleasure, to discover the library and its services, to work together and explore new things.

Local competitions of families "Bibliomans" and Cross border competitions of families "Know or guess" where 25 families participated in JCL Family Competition. Teams demonstrated their erudition, knowledge, skills and also success in solving 11 tasks. Theese teams tried to built a book tower, to find the books they needed on the library shelves, organised books in alphabetical order, performed foreign language tasks, etc. Purpose and tasks of local family competitions:

- promoting the library as a place for families where it is interesting to spend their spare time and learn new knowledge in science and foreign languages.
- to find out the cities of Jelgava and lead the most erudite and active families.
- Nominating the 5 most effective families to participate in the finale of the Family Competition in the Public Library of the Municipality of Shaul (Lithuania).
- implement the principle: the key is not to win, but to enjoy moments of co-operation.
- to consolidate and create a friendly environment for Jelgava city and county families.

Quotes from family feedback on competitions:

The families admitted that they "*the family played and had so much fun with each other for what they often lack a time." This has been a very good move for families as a team. Although the measure was primarily to demonstrate their knowledge, team members acknowledge that they also learned some new facts when performing their tasks. "*

Honeycomb family: "*The biggest benefit of this all – spent time together, focusing on one thing that picks up very rarely* in today's rush."

The poodle family: "*This was a cool family-building event, while also educational, because we also learned new things."*

The introduction of the **"Learning from each other"** approach attracted young volunteers (e.g. pupils from schools) and a Lithuanian student who has also acted as a volunteer in the public library of the municipality of Shauļu.

This is a method which encourages productive collaboration between different generations that visit the library. More promising and active youths are involved in library services through the international "knowledge ambassadors" network. The benefit of this activity is that library services accessibility is improved and senior community become more advanced in technologies. This way the initiative contributes to the improvement of quality of life amongst general population and particularly the elders and contributes toward the increased use of libraries. All of the libraries have the potential for implementing this method in long term, because it does not require great additional financial resources and encourages efficient use of existing library resources of all generations.

Volunteer youth led individual lessons for seniors as a way to operate a self-service facility. It should be acknowledged that recruitment of young volunteers was one of the most difficult tasks of the project. This task requires a large amount of

time, work resources and initiative from young people themselves. However, the project has encouraged more active work on such tasks and to pursue this approach beyond the end of the project.

Independent language learning system at the library - by offering different additional services libraries attract new visitors that my turn into new users. Learning languages becomes more and more important in now days. Library uses software "EuroTalk Interactive" which allows independent study of English, German, French, Italian, Spanish, Russian and Latvian languages. Software has a good versatility and adaptability to all generations of visitors – each user can choose the level of the language being learned, depending on their competences and needs. Most languages can be learned in 6 different levels, except for Russian – 5 levels, Latvian – 4 levels. <u>Service has been introduced in Siauliai.</u>

The main benefits of the system:

- The knowledge of foreign languages allows the visitors to use a wider range of digitized library and other organisations' services independently (e.g. international books, magazines or databases of publications);

- Employment opportunities are improved - potential employers consider language knowledge as a valuable asset in an employee's skill set, as in now days businesses have less and less borders. The competitiveness of the region is increased while rising the educational standard of local residents;

- Quality of life is improved – knowledge of languages gives more opportunities for communication and collaboration, travel, self-expression and occupational opportunities.

- English language understanding will help customers of libraries better learn and use computer, mobile devices and other modern technologies.

- As a system is "do it yourself" librarians can be assigned to other tasks, they do not have to spend much time on serving the users. In this way library runs additional service, attracts new visitors, without using extensive staff resources.

Jelgava and Liepaja libraries consider this as a good example and would like also to introduce such service in the future. In addition to international languages, these libraries would love to use it for teaching Latvian language, as it is also very demanded due to high proportion of Russian speaking people.

3.2 How does these solutions change the work of librarians and libraries?

Changes and challenges arise from the digital era, when society is often replacing physical reading of books with audio and e-books or choosing other educational, entertaining or informative activities in a virtual environment. Similarly, the professional daily life of society demands new digital skills and knowledge, and the growing use of e-services.

Librarians and libraries have long ceased to fulfil only the role of bookmakers and other reading agents, storage agents and issuers. Libraries from the "Book

Depository" have to transform themselves into personality development centers. Libraries are formed as community centres in the area where people of different generations, with different social status and occupation, can enjoy and meet in person rather than in fact, particularly libraries on the outskirts of cities or rural areas, where the library is often one of the few public and free places for any citizen.

Partnering libraries are much more then a plece for a lending a book. Libraries has become a community space, where people of all ages can spend hours participating in group meetings, conferences, exhibitions, play games, watch TV, listen to music, pay taxes and much more. In a society where the library is considered a "third place", a local meeting place, the social interaction and the exchange between people has become the increasingly important and the staff needs more time for the library users.

Furthermore, librarians should lead the way in technology use among fellow residents and gain more time for the most important: helping library users.

The purpose of self-check systems in libraries is defined as the provision of a range of unmediated self-check services to library users. In other words, users should be able to gain access to such services and complete the transactions they select without recourse to library staff. The main motivations for developing self-check systems in libraries are, to lower the workload of staff by the automation of routine processes and thereby to increase the efficiency of library, to increase the range of services available to library customers, and to make services more convenient for customs. Self-Check System although initially costly to implement, promises, according to its supporters, to provide savings in time, money and labour without diminishing the level of core services provided. Implementation of technology, upgrades and breakthroughs promise better performance, more efficiency, faster service, and less cost (Angel, 20016).

New self-service solutions have not required any specific knowledge of library staff. During the implementation of the system, it has required more working hours for the preparation of books to be used in a selfCheck (a special sticker was affixed to each book (RFID book tag), it's allowing security rules and selfCheck to recognize any library book).

In the long term - Self-service solutions enable much and more efficient way of issuing and restricting books. That means les number of customers to be served at the desk, and also frees up the time of library staff from routine transactions. Thus librarians will be able to provide more qualitative services - answer questions, provide the front-line help and consultations where it is most needed.

In the context of a library management system, this technology permits the rapid check-in and check-out of items, accurate and regular updating of inventory and the automatic generation of circulation data. The system avoids the need for the user to carefully align the barcode of individual items under the scanner of a conventional self-service unit and allows multiple items to be processed at one time, thereby efficiency and going a long way towards eliminating queues.

It takes a long time to develop and implement new services, it is not a one-day question, and libraries still have a long way to go to become a modern library.

Positive argument for implementation of self-service library system:

- reallocate staff elsewhere - automation will free up library staff from a routine and time-consuming task. Staff can then engage fully with customers requiring a more in-depth response which is a major step forward for the service;

- less queues when done well;

- Moore privacy to transactions (meaning there is a less embarrassment to the user when they want to take out an item they are self-conscious about);

- it makes the library more modern-looking and attractive to the young — schoolchildren often love the new machines and self-service machines can look positively. This "it's shiny" reason for purchasing is, however, obviously questionable;

- can create more space. Self-service normally greatly reduces the area needed for a counter area. This, in turn, can spur on a redesign of the whole area;

- other councils are providing self-service and so authorities that don't look old-fashioned.

Negative argument for self-service library systems:

- Installation is initially expensive;

- Technology doesn't always work accurately, there are options that require more time to perform, there are also errors, we can not be 100% on the operation of the machine;

- Self-service is often not initially popular or easily understood with at least parts of the library public meaning more staff time (that is, precisely that which the system may replace) is needed to train and reassure them. A small minority of users will often be extremely negative, even angry about its installation. The case of "self-service refugees" are not uncommon. This is where library users stop going to a branch with self-service and go to another branch which does not have it.

In developed countries public libraries change successfully becoming as the multifunctional information, resource and competence centres using progressive and modern technologies, introducing innovative solutions and new services for different needs of the diverse target groups.

The chart below shows an important improvement area reached after the adoption of new services during the implementation of the project.

How new solutions change the work of libraries?

Rating with 5 stars

	Save resources	More new services	New skills & competencies	New visitors/ customers
RFID technologies	★★★★☆	★★★★☆	★★★★☆	★★★★☆
Language Self-Learning System	★★★★☆	★★★★★	★★★★★	★★★★★
Families interact & learn	★★★☆	★★★★★	★★★★★	★★★★☆
Learn from each other	★★★★☆	★★★★★	★★★★☆	★★★★☆

Figure 15 How new self-services snd solutions has changed the work of libraries, source: created by authors

Introduced services are the first steps of partnering libraries into this direction - libraries have introduced additional services or have become more effective, free-up resources to work on new services. There four main groups of benefits from the introduction of new solutions and services.

Less resources spent - all introduced services, as a result improves the capacity of the libraries and thus they can spend less resources or with existing resources, serve more users which, in the long term it will also improve the financial efficiency of the libraries;

More new services - introduced library self-service solutions have improved efficiency of library services and work of librarians, as librarians are not so overworked just with issuing and receiving books from library customers, librarians use the working hours more efficiently for the development and introduction of new library services, in addition to new services introduced during the project;

Quality of service improves - as self-service solutions improve efficiency of libraries, and librarians are not so overworked just with issuing and receiving books from library customers, they can serve users that need additional information more deeply, spend more time with them, so that they can choose the book they really need and become more satisfied with services.

New visitors - introduced new services are more targeted to youth and young working professionals, who are quite busy in everyday, but in the same time they are easy adopters of new technologies. New services give an opportunity to pick up a book quickly (in order to do it faster, user can research online the intended book, save the shelf where it is located and in the working time of library quickly run in and take it with help of self-service terminal. When the book is done, it can be returned anytime in book return box. On the other hand, libraries could also face increase of seniors, as with initiative "Learning from each other" they become more technologically advanced and ready to use 21st century library services. Thirdly, by having more "free time" librarians can handle more group visits and thus partnering

libraries could start to have groups from schools (at present they have limited visits of groups from kindergartens).

In addition to above listed benefits, by implementing these solutions libraries are getting closer to achieving their set objectives and missions, e.g. the mission of Jelgava library is to advance intellectual and economic development of the society by providing access to information, ideas and literature independently of environment and borders, which is achieved by implementing self service solutions, thus society can access library services without human factor (busy librarian) or return book any time. In the same time, Jelgava library has seen positive experience of self - learning language classes and thus are more confident to introduce similar solutions in the nearest future.

The objective of LCSL is to contribute the growth of the society by being qualitative, accessible to every one centre of information, knowledge and culture by increasing its number of visitors by at least 10% in the next 3 years which also should be achievable after the implementation of the project, as self service solutions and introduced board games for children should increase the number of visitors.

Vision of the Siauliai Library is to become a modern, contemporary library that meets the needs of the community, to which also the implemented project contributes, as self-learning language solutions serve the society in increasing their knowledge and employment possibilities while family space fills free time of children with meaningful and educational activities.

3.3 How these solutions have changed customer-experience in the use of library services?

Libraries user's attitudes towards the equipment are crucial to the success of self-check. Therefore there is a need to invest a time and work to present new services and solutions to existing and potential users/ visitor of librariesw. People are changing to use new technologies when they receive individual training and experience. And from matter what technology the library would have developed, people will always want to communicate with the librarian - libraries also need human communication.

People's attitude is an important problem, especially the attitude of visitors that does not visit a library. They read the information in the press and share their negative comments about library technologies and new services, though not knowing details about how this system is working and what are the benefits. So, we need to find new ways to change people's attitudes.

The use of a self-check saves visitors time, allowing to avoid of waiting time in line until the librarian serves another reader. Of course, there are visitors who are introverted, they can take book themselves without being involved in communication.

Any advantage to use self-service system is about "time saving". And we are not to feel talking about library visitors, but also about librarians.

To meet today's users' needs as well as those in the future, the library must reflect the values of the users while also accommodating new information and technologies and the ways we access and use them. Technologies in libraries are those which relatively and trained users can interact easily. It is so designed that it

fits most types of users in a friendly environment. It also connotes as a library which is easy to use, attractive, warm and comforting place which welcomes to use the resources. It is, in other words, meaning personalised or in-person help to users of a library. The library, which is still a combination of the past and the present (new technologies), must be viewed with a new perspective and understanding if it is to fulfil its potential to it users.

The main benefit of customers is that **the work of libraries with self-service solutions become more customer focused**, not book focused. Librarians can work more on issues of development, for example, research other countries' library development tendencies, analyse customer needs and provide more targeted services according to their individual needs.

Customers get faster service - customer can research preferred books online from home any time it is convenient, when users comes to the library, they can pick up the book their selves, without the involvement of librarian and quickly make a reservation through self-service terminal. When the book is done, it can be returned anytime in book return box. In chapter 2.7 groups of customers were listed, that librarians would like to have more in the libraries and having faster service with some independent 24/7 solutions would attract more young professionals and entrepreneurs.

Customers get in-depth service - as self-service solutions improve efficiency of libraries, as librarians are not so overworked just with issuing and receiving books from library customers, they can serve users that need additional information more deeply, spend more time with them, so that they can choose the book they really need and become more satisfied with services.

Customers get additional services - library of Siauliai has introduced self-service language learning. Language learning is essential for social inclusion and better work/carrier life, thus these services are demanded amongst local people and Language learning classroom in Siauliai very often is full. These new services, bring new people to libraries, who can become new users of library as well. In addition, as librarians spend less time on simple customer services (receive and issue books), they can spend time on research of future library development directions and potentially new services as in order to get new users, libraries now-days should implement new services. Thus, by implementing self service solutions, and by becoming more efficient, libraries can expand their services, and for example, offer language self-learning solutions, which is important to unemployed persons (one of the preferred customer groups that partnering libraries would prefer to see more in the library).

What concerns additional service - self language learning - in an attempt to discover how the library customers value the new service the SCMPL conducted a visitor survey, in which 110 respondents took part. It was discovered, that the visitors most of all value the fact that they can study a foreign language at the library for free; the opportunity of being able to study a language independently, establishing practical language skills, simple and clear use of the software were also important.

Additionally, the users think that visiting the Foreign language learning centre is beneficial because they can spend their leisure time constructively, they are

motivated by the opportunity to meet co-minded people and to communicate with the pleasant staff of the library. Almost all respondents (99%) have evaluated this service positively and have recommended it to their family and friends.

4 Foreign best practices and trends in development of library services

Public libraries are experiencing very rapid changes. They need to adapt to new challenges and opportunities. There are for more than 15 years on-going discussions about the transformation, shift or change of library services towards the future new and innovative services (Casey & Savastinuk, 2006[4]; Bingsi & Xiaojing, 2006[5], Koloniari et.al., 2019[6], Dillon, 2019[7]).

Various authors in researches provide information on a wide range of innovative services and solutions developed by libraries in various fields that goes far from the traditional library services (Muthu et.al, 2015[8]; Kelly, 2019[9]; Spencer, 2019[10]; Bivens-Tatum, 2019[11]; Cox et.al, 2019a[12]; Cox et.al, 2019b[13]; Cervone& Brown, 2019[14]; Crowe et.al., 2019[15]; McKinstry & Garrison, 2019[16]; Liu et.at., 2019[17]; Winkelstein, 2019[18]).

Further this section provides various examples of foreign libraries that has introduced new modern services and self- service solutions.

Figure 16 ilustration source: created by authors

---

[4] Casey, M., & Savastinuk L. (2006). Library 2.0: Service for the Next-generation Library In: Library Journal.

[5] Bingsi, F., & Xiaojing, H. (2006). Library 2.0: Building the New Library Services [J]. *Journal of Academic Libraries*, *1*, 2-5.

[6] Koloniari, M., Vraimaki, E., & Fassoulis, K. (2019). Factors affecting knowledge creation in academic libraries. Journal of Librarianship and Information Science, 51(1), 20-33

[7] Dillon, D. (2019). THE WAY I SEE IT: Digital books: Making e-books work for publishers and libraries. College & research libraries news, 61(5), 391-394

[8] Muthu, M., Rameshbabu, P., & Baskaran, C. (2015). Rethinking of innovative LIS services for libraries in digital era. INFORMATION SCIENCE, 2(02)

[9] Kelly, M. C. (2019). Every Librarian a Leader: Student retention and academic libraries. College & Research Libraries News, 56(11), 757-759

[10] Spencer, D. B. (2019). Boosting libraries at university orientations: Designing promotional booths. College & research libraries news, 63(6), 418-419

[11] Bivens-Tatum, W. (2019). Expert services on the Web: The commercial competition for libraries. College & research libraries news, 62(7), 714-716

[12] Cox, A. M., Pinfield, S., & Rutter, S. (2019a). Academic Libraries' Stance toward the Future. portal: Libraries and the Academy, 19(3), 485-509

[13] Cox, A. M., Pinfield, S., & Rutter, S. (2019b). Extending McKinsey's 7S model to understand strategic alignment in academic libraries. Library Management, 40(5), 313-326

[14] Cervone, F., & Brown, D. (2019). Transforming library services to support distance learning: strategies used by the DePaul University Libraries. College & Research Libraries News, 62(2), 147-153

[15] Crowe, K., Crumpton, M. A., Gwynn, D., Harper, J., Lock, M. B., & Scanlon, M. G. (2019). The Status of Entrepreneurship in Libraries: Content Analysis and Assessment from the Conference for Entrepreneurial Librarians. In Supporting Entrepreneurship and Innovation (pp. 115-132). Emerald Publishing Limited

[16] McKinstry, J., & Garrison, A. (2019). COMMUNITY & COLLABORATION: Building communities@ your library: These libraries have many community programs. College & research libraries news, 62(2), 165-186

[17] Liu, F., He, J., Wu, Z., Chen, J., & Zhang, K. (2019). Book Searching Navigation in Libraries Based on iBeacon Technology. Journal of Computer Sciences and Applications, 7(1), 10-15

[18] Winkelstein, J. A. (2019). The Role of Public Libraries in the Lives of LGBTQ+ Youth Experiencing Homelessness. In LGBTQ+ Librarianship in the 21st Century: Emerging Directions of Advocacy and Community Engagement in Diverse Information Environments (pp. 197-221). Emerald Publishing Limited

Library as a new home for the technologies, artificial intelligence and robotics

Analyzing foreign experience there is a number of different technological solutions that can be further developed in libraries to improve the customer experience, as well the performance and efficiency of libraries. New technologies help to sustain and increase the competitiveness of library services in comparing other opportunities available to users and visitors of libraries.

Within the Library of the Rhode Island there has been created **artificial intelligence lab in the library** which shall help practitioners and researchers to expand researches and practical work on developing various solutions based on the Artificial Intelligence opportunities.

Big data – RFID system proved an opportunity to store large set of data about users and visitors of library, e.g. about their patterns and behavior, the way of using library services and most common needs. This information can be analysed to in order to make the best use of these massive sources of information. Big data can improve the library's activity in overall, provide valuable information for developing new services, innovations and enrich services.[19] The analyses of such data allows creation of customized reading recommendations for different groups of library visitors and for each individual.

Some of libraries has created specific phone applications - **Apps** in the phone that are linked to the RFID system, electronic catalog of books and through such App delivers personalized information and offers to each library user and visitor, for instance personal recommendations of readings, invitations to specific events, etc.

Researches has proved a profound opportunity for increased access to the library collections. In such apps libraries can react more dynamically to library users needs and interests based on the available library digital resources (Hahn, 2012[20]). Most cases the augmented reality App is used for fast and on the demand selection of books and other sources for reading. Then app can provide and recommend other reading sources similar to the topic or most frequently book by other users having the same reading choices. The city of Philadelphia partnered with Azavea has build augmented reality app, which allows "to overlay historical images into the user's onsite experience in real-time and intend on providing prototypes for user's

---

[19] publiclibrariesonline.org
[20] Hahn, J. (2012). Mobile augmented reality applications for library services. New library world, 113(9/10), 429-438

interested in engaging with the digitized collections in the physical real-world environment" (Hahn, 2012[21]).

There is also experience from Goethe- Institute New York Library, which developed the mobile app with augmented reality features allowing possibility to explore the German cultural heritage, using archival documents, photos and multimedia materials[22].

Author Kozlowski [23] described good practices of new technologies, for instance, the device from a Chinese design company Toout which besides ensuring bookmarks also has features that facilitate the user's activity related to finding books. Besides this author provides some practical video on best case examples explaining why and how libraries may use possibilities of AI and augmented reality - https://youtu.be/aMWDnvRBKiw.

Kent Free Library within Kent city, USA has created "**Technology Petting Zoo"[24]**, where library users, especially those that are not digital natives, for instance, seniors, can have first experience and learn using of different technological gadgets. Library users accompanied and assisted by librarian can without fear experience using e-readers of books, tables, 3D printer and other "smart" devices. Also, different computer classes are organized within the groups. As from the services this is not something extremely new, but innovation is more related to the value proposition and the name for particular department, where the "Technology Petting Zoo" attracts more new library users with its funny and interesting name[25].

The Contra Costa county library with scanning of QR codes allows library users to access various library services within and outside the libraries. This is important in the outreach wider target groups, in particular those not visiting libraries, for instance placing through QR code a certain information in the bus or at the bus station[26].

While dreaming about the technological future of robots and self-driving vehicles, Kozlowski[27] is confident that in nearest future the book delivery will be possible using "**book delivery drones**". Also, Kozlowski described the idea of a having the digital interface of printed books, thus libraries may promote and enhance of reading printed books.

---

[21] Hahn, J. (2012). Mobile augmented reality applications for library services. New library world, 113(9/10), 429-438
[22] https://www.pewresearch.org/internet/2013/01/29/innovative-library-services-in-the-wild/
[23] https://ebookfriendly.com/library-future-technologies/
[24] https://www.pewresearch.org/internet/2013/01/29/innovative-library-services-in-the-wild/
[25] https://kentfreelibrary.org/adults/adult-services-button/
[26] https://www.pewresearch.org/internet/2013/01/29/innovative-library-services-in-the-wild/
[27] https://ebookfriendly.com/library-future-technologies/

Latvia is one of countries that actively work on the development of 5G infrastructure and facilities. Also, public authorities are active in building up the network of stakeholders from various industries that will offer and consume "real time" services using drones and other self-driving technologies. Latvia has been positioned as one of important players and logistic centers for such future technologies. It is hard to predict how close is the possibility to see drones and other similar technological gadgets delivering books to the users of libraries, but with the additional support and string incentives of the policy makers, this can be started to test in comparatively close future. Partnering libraries may attract support from Horizon 2020 or other similar programmes to investigate, develop and test concept of using drones to support a daily work of libraries. Such project could become as an important pilot innovation not just in Latvia and Lithuania, but in whole northern part of EU.

Library uses service design and involve users in developing new services

Helsinki central library Oodi can be provided as a good example in several issues. This library is positioned to its users as "a living meeting place". Oodi ensures to the library visitors "knowledge, new skills and stories, and is an easy place to access for learning, story immersion, work and relaxation. It is a library of a new era, a living and functional meeting place open for all"[28]. Starting from the initial development of this library, it has used "user experience" (Trischler et.al., 2018[29]; Kim et.al., 2018[30]) and "service design" (Yu & Sandiorgi, 2018)[31] approaches meaning that the services and the whole concept of this library has been developed in close cooperation with the residents of the Helsinki city through different public events and workshops. In such this library is aiming to meet the needs of all diverse groups of the residents of Helsinki city. According to the information of Oodi, users of the library were involved in the planning and design of the information signs, furniture and placement of the materials of this library (Oodi, 2019[32]).

---

[28] https://www.oodihelsinki.fi/en/what-is-oodi/

[29] Trischler, J., Pervan, S. J., Kelly, S. J., & Scott, D. R. (2018). The value of codesign: The effect of customer involvement in service design teams. Journal of Service Research, 21(1), 75-100.

[30] Kim, M. J., Lim, C. H., Lee, C. H., Kim, K. J., Park, Y., & Choi, S. (2018). Approach to service design based on customer behavior data: a case study on eco-driving service design using bus drivers' behavior data. Service Business, 12(1), 203-227.

[31] Yu, E., & Sangiorgi, D. (2018). Service design as an approach to implement the value cocreation perspective in new service development. Journal of Service Research, 21(1), 40-58.

[32] https://www.oodihelsinki.fi/en/what-is-oodi/service-design/

Library as a community centre for learning, relaxation, creation and work

Adult digital media lab[33] within the Skokie Public Library a space where users/ visitors of the library can create and share video, music, photography, and design projects. There is an access to computers with editing software, cameras, camcorders, microphones, musical keyboards and a green screen wall for video projects. This Lab has its own computer facilities with Photoshop elements, iLife and other creators' software. Also, this lab has electric guitar, electric drum set, digital video converters and a Blu-ray burner.

The Skokie Public Library has created **Program, Play and Fun Spaces**[34] where preschool aged kids can listen stories, fairy tells, make fun projects, do creative activities and play Lego in the pre-school area, school – aged kids can do their school homework or play games in the Junior area.

Source: https://skokielibrary.info/services/parents/

The BOOMBOX[35] is a specific space within the Skokie Public Library with interactive gadgets and facilities designed to promote STEAM learning for all ages. To encourage library users to visit this space regularly the library promotes every few months new theme of STEAM providing different exercises, workshops, debates, discussions and other events.

The Oodi (a library of the Helsinki city) uses creative and interesting value proposition in the offer of its services. **The Book Heaven** – fulfilling the historical function of libraries, Oodi offers various range of books in more than 20 languages. The Book heaven has a modern design and comfortable furniture allowing its users to read books sleeping on sofas under the trees. Modern and cosy interior is one of key features that attracts not just local citizens of Helsinki city, but as fell foreign tourists visiting Helsinki.

Users of the Oodi library can access and use a wide collection of music, videos and movies. Also different video and board games are available for different age of the users of this library. There is specifically dedicated playrooms where users of the library can play games, but also teams can corporates can organise team building events and different creative workshops. The Oodi has several studios and

---

[33] https://skokielibrary.info/services/computers-technology/
[34] https://skokielibrary.info/services/parents/
[35] https://skokielibrary.info/resources/boombox/

music playing rooms where artistic musicians can record a music. "The rooms contain workstations, amplifiers and other musical equipment" [36]. Also, library users can rent different music instruments, e.g. guitars, basses and synthesisers.

The Oodi provides the Urban Workshop space where people can develop and create new products, ideas and concepts. Urban Workshop provides a number of professional tools for handicrafts, the laser cutter, 3D printer, sticker printer, sewing machines and other tools. Library provide and opportunity to its users to develop the creativity, self-expression, new business and project ideas. This space allows to all generations develop robotic and IT skills, and learn new technologies, like, the artificial intelligence.

---

[36] https://www.oodihelsinki.fi/en/services-and-facilities/services/#bookheaven

Lot of examples can be found of libraries delivering "business incubator" or "business start-up co-working" spaces. Libraries develop specific services that encourage and promote business start-ups among local inhabitants. Such examples can be found not just foreign countries, but also some libraries within the countries of partnering libraries of this project, for instance, Bauska (LV) and Pasvalys (LT) business support libraries[37]. Different libraries of EU, USA and Canada become an important element the support ecosystem of business.

Library goes out in the city and is available for families with kids

One of the branches of Helsinki central library Oodi has been created in one of the largest shopping and entertaining activities centres. Besides the traditional library services this library ensures as well wide range of services for the community and local inhabitants, for instance social services, rent of different supplies for crafts men.

Also, named as the **Childrens' World** encourages children to create different things and experiment. Also, there is a story telling and performance room for kids, and a baby – treatment room for young parents coming to the library with their babies.

---

[37] https://www.bauska.lv/en/project-business-library

To ensure mobile library centres and services are famous ideas that are met different countries and also in some municipality libraries in Latvia. This video provides a good example and approaches. "The Ideas Box is a revolutionary concept developed by Librarians Without Borders, with the aim to reach people in refugee camps and impoverished countries, but could be also used any time the idea of a mobile library is considered" - https://youtu.be/9PiL1I1cBJI.

Kent Free Library within Kent city, USA **"Library @ Your Door"** ensure a service of the book delivery directly to the home of library users. This service has been introduced with a particular interest to help those society members – existing and potential library users, that are not able or have difficulties to leave their home (e.g. persons with functional disabilities, alone parents with small kids). This library offers two possibilities either arranging an interview with these persons on book preferences then allowing librarians to select books or reserving particular book through an on-line catalogue[38].

A Library – Go – Go is a service provided by the Contra Costa County Library (in USA) where they offer a automated book dispensing machines. Such machine hold approximately 400 books and is available in 24/7 regime operating similarly like the ATM machines where to withdraw a money. Library users with their readers card can get (withdraw) up to 3 books and return taken books within these library book dispensing machines. According this library "these automated library vending machines have been successful in expanding a library's presence into areas where they could not traditionally be reach"[39]. Such book dispensing machines are now available in different libraries in different countries, for instance, cities Toronto and Otawa in Canada (see picture below)[40]. There are different solutions where such boo dispensing machines are places, but usually these places or areas are somewhere with comparatively large citizen flow (shopping moles, cultural centres, public authorities, train/ bus stations, etc.).

---

[38] https://kentfreelibrary.org/services/library-your-door-service/
[39] https://www.pewresearch.org/internet/2013/01/29/innovative-library-services-in-the-wild/
[40] https://www.thestar.com/news/gta/2015/08/05/toronto-library-to-roll-out-book-lending-machine-at-union-station.html

Pima county library has developed a **Bookbike**, which is 3-wheeled tricycle with specifically created a box in front of the bike containing the bookshelf within it. Librarians drive bookbike around different locations of the municipality to issue books for reading, to attract and register new visitors or users of the library, to issue information about important events organised by library and circulate other important information (see photo below).[41] Also there are some more examples from other libraries moving outside of the library premises and offering services on the wheels of bicycles.

Source: https://www.azpm.org/s/9235-pima-county-library-s-bookbike/

Other good practice creative and interesting services of libraries

"Kill a watt" – gives an opportunity to measure the consumption of the electricity home appliance electric use and promote the use of renewable energy resources - offered at the Scarborough Public Library in Maine[42].

Helsinki and other public libraries offer the opportunity to lend or borrow different tools and products, staring from tools from craftsmen to musicians.

Lot of libraries have developed a number of social care services, medical help, assistance in the naturalisation process in order to gain citizenship for residents

---

[41] https://www.azpm.org/s/9235-pima-county-library-s-bookbike/
[42] https://www.scarboroughlibrary.org/solar

of other nationalities or countries, and other public services (Pima county library, Orange County library, San Francisko public Library).

Some of libraries consult citizens and entrepreneurs about taxes and fulfilment of tax declarations (Judge Armstrong Library in Missisipi). Also, such example can be found in Bauska library in Latvia.

Libraries offer different education services, programmes and events. There are education activities for specific target groups, for instance, the university of seniors, which is famous social initiative throughout EU delivering training and educating leisure activities to 50+ aged citizens. Also, a number of activities promoting healthy lifestyle and health treatment for different society members is implemented through specific projects of libraries or their partnering institutions.

Performers showcases and other events encouraging people of different age to develop creative and artistic skills, e.g. Washington Public Library. Different creative workshops – soap making, candle making, cake decoration, dancing classes, beekeeping and other activities are provided and organised by the libraries.

"Coffe, donats & movie day" – local citizens and visitors of library can come in particular hours to watch movies, discuss and network with other. Such movies range from old classics to historical dedicated to specific events/ dates, also comedies and other movies (Dodge City Public Library).

5 Recommendations for further development of partnering libraries

In the future all partnering libraries shall consider continuous possibilities to develop and introduce new services. An existing experience of partnering libraries and foreign practice show different directions that should be developed, adopted or strengthened within libraries (see picture below).

Libraries will become as an important driver in further education and information of society. Libraries as mediators shall promote the development of critical thinking when analysing one or another information source, and even more important considering the actual source, content and target of the information provided. Libraries shall help in recognising "fake" news and information.

1 Inform, educate & entertain

2 Encourage society for creativity & self-performance

3 Socializing & communication point

4 Bring future perspectives

5 IT & technological avatars

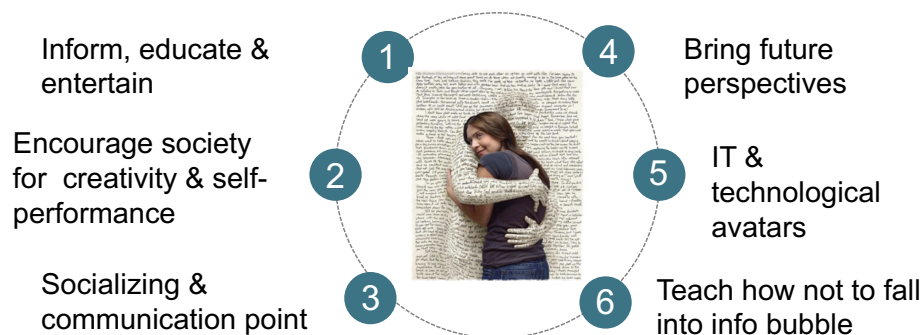**6** Teach how not to fall into info bubble

Figure 17 Tasks of future modern libraries, source: created by authors

Libraries are often located in the premises that are shared with other public institutions either for youth activities, senior leisure activities, for arts and even social or health care. In such position's libraries can serve as local centres for personal development, especially helping to developed creativity self -awareness on existing personal strengths and future potential. Also, libraries may help in the growing and widening network of personal contacts through different in-door and out-door activities and events.

Being few steps closer to scientific databases and other research sources, it is important to develop libraries as future centres of excellence that orient and are aware of existing actual trends regarding the needs, interests and occupation of their visitors.

Libraries and librarians have proven being able to educate and develop computer skills among seniors and other groups of customers. This trend shall be continued as new technologies arrive and require continues development.

Modern design thinking and service design methods suggest analysing and understand more user behaviour, user needs and experience. By offering most appropriate solution for particular problems of users, libraries can reach high user satisfaction. New RFID system allows digital collection of data and opinions of library users and this function shall be more developed and strengthened as an important skill among librarians. According to Ahenkorah-Marfo & Nikoi (2019), the user

satisfaction is one of the most important criteria for the assessment of a performance of each library. Collection of feedback and opinions shall be introduced within the daily routine of each library.

Moreover, besides the development of new services and topics, libraries should introduce new approaches how they work, interact and communicate with users. Interactive methods should be as an integral part of services of each library ensuring that libraries entertain visitors of libraries. "Libraries go out in the city" is an event organized during the project and is seen as a successful to communicate with and raise awareness within the society about new modern "future" libraries.

New generations do not associate their status with the ownership of particular tangible assets. They prefer to pose their status through their expressed values, hobbies and attitude to their life in general. This forms good base for the development of sharing economy. Creating activities and platforms where library users may share with their peers assets or resources would be valuable opportunity for the library users. Experience economy with a number of examples in digital media and other industries can give as a lesson to consider where and how libraries can involve its users in the idea generations, development and implementation of new services.
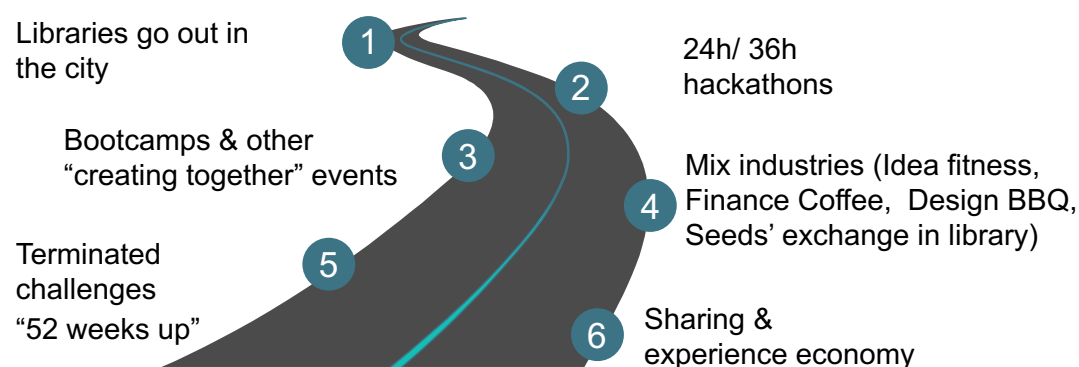

Figure 18 New approaches and methods of work of future modern libraries, source: created by authors

Younger generations have swelled and grew up with games. Games remain an integral part of motivating both personnel and selling and other service providers and potentially in areas that are important to library users. Playing is no longer a separate method, but as part of the process, in different activities and in the establishment. The picture below demostrates main features users usually expect and get within the gaming industry.

Figure 19 Gaming elements as a part type of work of future modern libraries, source: created by authors

Foreign experience shows that there is a wide range of new solutions and services that has been introduced by libraries going far away of traditional public libraries. Some of these new solutions are encouraged due to new needs and behaviour of libarray users and visitors. Comperatively large amount of innovative solutions are derived from the technological development, e.g. book dispensing machines, new apps and other.

Also, this analyses shows that libraries not always invent and introduce completely new services, but they apply new creative names for already well knownk services, for instance, Technology Petting Zoo, Boombox, CreateIT, a Library-go-go, etc.

6 References

Ahenkorah-Marfo, M., & Nikoi, S. K. (2019). Change for a Better Paradigm: Assessing the Library Services for Distance Learners in an African Institution. Journal of Library & Information Services in Distance Learning, 1–12, doi:10.1080/1533290x.2019.1642286

Angel. (2006). Angel, E. (2006). *RFID implementations in California Libraries: cost and benefits.* USA, Institute of Museums and Libraries

Bingsi, F., & Xiaojing, H. (2006). Library 2.0: Building the New Library Services [J]. Journal of Academic Libraries, 1, 2-5.

Bivens-Tatum, W. (2019). Expert services on the Web: The commercial competition for libraries. College & research libraries news, 62(7), 714-716.

Casey, M., & Savastinuk L. (2006). Library 2.0: Service for the Next-generation Library In: Library Journal.

Cervone, F., & Brown, D. (2019). Transforming library services to support distance learning: strategies used by the DePaul University Libraries. College & Research Libraries News, 62(2), 147-153.

Cox, A. M., Pinfield, S., & Rutter, S. (2019a). Academic Libraries' Stance toward the Future. portal: Libraries and the Academy, 19(3), 485-509.

Cox, A. M., Pinfield, S., & Rutter, S. (2019b). Extending McKinsey's 7S model to understand strategic alignment in academic libraries. Library Management, 40(5), 313-326.

Crowe, K., Crumpton, M. A., Gwynn, D., Harper, J., Lock, M. B., & Scanlon, M. G. (2019). The Status of Entrepreneurship in Libraries: Content Analysis and Assessment from the Conference for Entrepreneurial Librarians. In Supporting Entrepreneurship and Innovation (pp. 115-132). Emerald Publishing Limited.

Deschamps T. (2015). Toronto library to roll out book – lending machine at Unin Stations. Available at: https://www.thestar.com/news/gta/2015/08/05/toronto-library-to-roll-out-book-lending-machine-at-union-station.html

Dillon, D. (2019). THE WAY I SEE IT: Digital books: Making e-books work for publishers and libraries. College & research libraries news, 61(5), 391-394.

Hahn, J. (2012). Mobile augmented reality applications for library services. New library world, 113(9/10), 429-438.

IFLA. (2001). *The Public Library Service: IFLA/UNESCO Guidelines for Development.* Retrieved from https://www.ifla.org/files/assets/hq/publications/archive/the-public-library-service/publ97.pdf

Jelgava City Library Development Strategy. (2016). *A strategy for how the library works.*

JCL. (2018) "Jelgava city libraries work report".

Jharotia, A. K. Innovative Technologies echnologies and Services in Libraries: vices in Libraries: An Overview. Available at: https://www.researchgate.net/profile/Anil_Jharotia/publication/326972489_Innovative_Technologies_and_Services_in_Libraries_An_Overview/links/5b6e974992851ca65055275e/Innovative-Technologies-and-Services-in-Libraries-An-Overview.pdf.

Kelly, M. C. (2019). Every Librarian a Leader: Student retention and academic libraries. College & Research Libraries News, 56(11), 757-759.

Kim, M. J., Lim, C. H., Lee, C. H., Kim, K. J., Park, Y., & Choi, S. (2018). Approach to service design based on customer behavior data: a case study on eco-driving service design using bus drivers' behavior data. Service Business, 12(1), 203-227.

Koloniari, M., Vraimaki, E., & Fassoulis, K. (2019). Factors affecting knowledge creation in academic libraries. Journal of Librarianship and Information Science, 51(1), 20-33.

Kozlowski p. (2018). "Library of the future: 8 technologies we would love to see", available at: https://ebookfriendly.com/library-future-technologies/

Librarc. (n.d.). WHAT is RFID (radio frequency identification) technology? Retrieved from https://www.bibliotheca.com/library-rfid-technology /

Liu, F., He, J., Wu, Z., Chen, J., & Zhang, K. (2019). Book Searching Navigation in Libraries Based on iBeacon Technology. Journal of Computer Sciences and Applications, 7(1), 10-15.

McKinstry, J., & Garrison, A. (2019). COMMUNITY & COLLABORATION: Building communities@ your library: These libraries have many community programs. College & research libraries news, 62(2), 165-186.

Madrigal C.A. (2019). The servant economy. Available at: https://www.theatlantic.com/technology/archive/2019/03/what-happened-uber-x-companies/584236/

Muthu, M., Rameshbabu, P., & Baskaran, C. (2015). Rethinking of innovative LIS services for libraries in digital era. INFORMATION SCIENCE, 2(02).

Reichmann, G., & Sommersguter-Reichmann, M. (2010). Efficiency measures and productivity indexes in the context of university library benchmarking. Applied Economics, 42(3), 311-323.

Oodi, available at: https://www.oodihelsinki.fi/en/what-is-oodi/service-design/

Spencer, D. B. (2019). Boosting libraries at university orientations: Designing promotional booths. College & research libraries news, 63(6), 418-419.

Stremetska D.(2016). 7 industries where Uber for X flourishes. Available at: Strhttps://stfalcon.com/en/blog/post/7-industries-where-Uber-for-X-flourishes

Trischler, J., Pervan, S. J., Kelly, S. J., & Scott, D. R. (2018). The value of codesign: The effect of customer involvement in service design teams. Journal of Service Research, 21(1), 75-100.

Uvarova I., Atstaja Dz., Korpa V. (2019). "Challenges of the introduction of circular business models within rural SMEs of EU", Proceedings of the IISES Economics & Finance Conferences, Prague, Czech Republic, ISSN: 2336-6044 (submited)

Winkelstein, J. A. (2019). The Role of Public Libraries in the Lives of LGBTQ+ Youth Experiencing Homelessness. In LGBTQ+ Librarianship in the 21st Century: Emerging Directions of Advocacy and Community Engagement in Diverse Information Environments (pp. 197-221). Emerald Publishing Limited.

Yu, E., & Sangiorgi, D. (2018). Service design as an approach to implement the value cocreation perspective in new service development. Journal of Service Research, 21(1), 40-58.

Internet sources

https://gigazine.net/gsc_news/en/20190828-helsinki-central-library-oodi/

https://kentfreelibrary.org/adults/adult-services-button/

https://www.pewresearch.org/internet/2013/01/29/innovative-library-services-in-the-wild/

https://skokielibrary.info/services/computers-technology/