

**ICT**  
SHOWROOM  
2023

**STUDENT PROJECT EXHIBITION  
& COMPETITION**



ictshowroom.fi  
#ictshowroom  
linkedin.com/company/ict-showroom



## Schedule 9.3.2023

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### Event takes place in ICT City / Educity, TurkAMK

- 9.00 Building ICT Showroom starts
- 10.00 ICT Showroom Opens (ICT City)
- 10.00 Public voting opens
- 13.30 ICT Showroom ends
- 13.30-14.30 Dismantling
- 14.30 Pitch finalists announced  
(ICT Showroom home page + team contact)
- 14.45 Pitch finals (Taidon portaat, Educity), winners voted by Jury
- 15.15 Price ceremony (Taidon portaat, Educity)
- 15.45 → Showroom Afterwork by Boost @ Sparkup

### Jury members

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- Petri Hirvonen, Sade Innovations Oy
- Mari Jokiranta, Vincit Oyj
- Rami Kokkala 2M-IT Oy
- Johanna Korpela, Epec Oy
- Ville Oksanen, ATR Soft Oy
- Lassi Puolakka, MiTale Oy
- Teemu Valtonen, Cadmatic Oy
- Niklas Öhman, Nextfour Oy

### Organizers and contact information

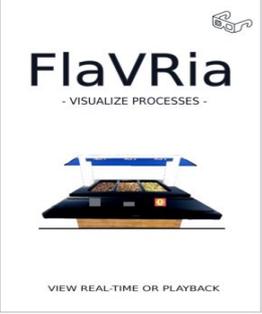
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Åbo Akademi - Jerker Björkqvist, Jan Kraufelin  
TurkuAMK - Marika Säisä, Elina Karaus, Mikko Niskanen  
Turun yliopisto - Timo Vasankari

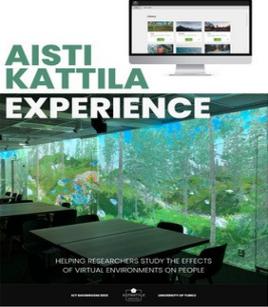
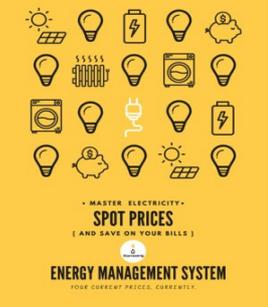
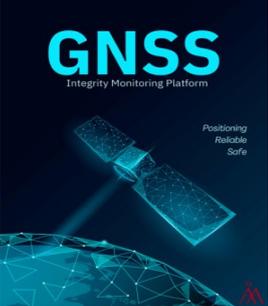
Streaming: Nico Kranni, Annukka Kinnari

Online leaflet: [abacus.abo.fi/ictshowroom](http://abacus.abo.fi/ictshowroom)

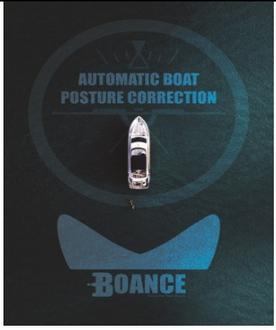
 <p><b>Lokala</b> Connecting you to local businesses</p> <p>Discover the hidden gems of your community! lokala.fi</p>	<b>S11 Lokala</b>		Web, Sustainable development	AA
	Discover local products near you			
	Hanna Liman, Iréne Åbrandt, Yuto Kvist, André Nordström, Hanna Sundkvist	Contact person: <a href="mailto:hanna.liman@abo.fi">hanna.liman@abo.fi</a>  Web: <a href="http://lokala.fi">lokala.fi</a> Video: <a href="https://www.youtube.com/watch?v=4CxTndkhD_I">https://www.youtube.com/watch?v=4CxTndkhD_I</a>		
	Discover the hidden gems of your community with Lokala! Our innovative web application brings together small local businesses, making it easy for you to find unique, locally-made products right in your own neighborhood. With our user-friendly map interface, shopping local has never been easier. Support your community and explore the diverse offerings of local businesses with Lokala. Join now and experience the pride and authenticity of buying local!			

 <p><b>FlaVRia</b> - VISUALIZE PROCESSES -</p> <p>VIEW REAL-TIME OR PLAYBACK</p>	<b>S12 FlaVRia</b>		Embedded system, Desktop, Cloud Business administration	UTU
	Flavoria VR foodline			
	Asseri Heervä, Tuomas Santa, Joonas Mäntysalo, Maiju Kyyhkynen, Raisa Sjöholm	Contact person: <a href="mailto:afheer@utu.fi">afheer@utu.fi</a>  Web: Video: <a href="https://www.youtube.com/watch?v=rTdN_agz1KQ">https://www.youtube.com/watch?v=rTdN_agz1KQ</a>		
	VR application for visualizing a student restaurant lunch line. Powered using a message-driven pipeline from scale sensors through cloud to a custom VR visualizer app. In the restaurant, every food taking spot along the lunch line has a scale that measures how much of each different food the eater takes. Our application shows the state of these scales in VR in an environment replicating the actual restaurant. This is meant as a debug/research tool first but is also designed to be ready for extended public-facing use in the future.			

 <p><b>OPTIMIZATION</b></p> <p>Efficiency Durability Availability</p> <p>10:30-15:00 Joukkoherätyks 3, 20230 Turku ICT ShowRoom 9.3.2023</p>	<b>S13 Geographical Optimization of Solar Panel</b>		HW, AI, Sustainable development, Infrastructure services	UTU
	Geographical optimization of solar panels via data mining for Nordic and Southeast Asia customers			
	Aklilu Gebremariam, Eero Lapila, Guanghang Chen, Minorka Kiljala, Nea Kontturi	Contact person: <a href="mailto:guchen@utu.fi">guchen@utu.fi</a>  Web: Video:		
	The project is to design solar panels for different geographical locations specifically for South East Asian and Nordic countries. The main task will be to optimize the existing solar panel design for better efficiency, performance and cost of production. In this project different scientific research in solar panel design and technology have been analyzed in a form of literature review to deliver a technical report to our client company Solar Finland. PVsyst software have been used to simulate the general review of proposed design. The actual optimization for different components will be modeled for suggested parameters of design.			

 <p><b>AISTI KATTILA EXPERIENCE</b></p> <p>HELPING RESEARCHERS STUDY THE EFFECTS OF VIRTUAL ENVIRONMENTS ON PEOPLE</p>	<b>S14 Aistikattila</b> <p style="text-align: right;">Desktop, Education, Other, Research</p>	UTU
<b>Immersive sceneries for a multi-sensory research environment</b>	<p><i>Xuexian Chen, Heidi Laine, Jasperi Sivenius, Joonas Wiik, Eva Zorman</i></p> <p><i>Contact person: joona.e.wiik@utu.fi</i></p> <p><i>Web:</i> <i>Video: <a href="https://youtu.be/8hhGZAgS3M4">https://youtu.be/8hhGZAgS3M4</a>, <a href="https://youtu.be/p-YFcr9mBmA">https://youtu.be/p-YFcr9mBmA</a></i></p>	
<p>The Aistikattila project focuses on creating a simple user interface that combines the separate components of a multi-sensory research environment into a more usable entity. Audiovisual sceneries with added immersion aim at expanding the existing research area to accommodate multiple different fields and studies, where researchers can make adjustments to the experience for separate study groups.</p>		
 <p><b>Current-ly</b></p> <p>SPOT PRICES (AND SAVE ON YOUR BILLS)</p> <p>ENERGY MANAGEMENT SYSTEM</p> <p>YOUR CURRENT PRICES. CURRENTLY.</p>	<b>S15 Current-ly</b> <p style="text-align: right;">Web, Other, Energy management</p>	AA
<b>Devices' management system based on electricity spot prices</b>	<p><i>marta.rihter@abo.fi, mathilde.leeve@abo.fi, juliette.boussel@abo.fi, anton.westerstrahle@abo.fi, erik.wihlman@abo.fi, kalle.lahtinen@abo.fi</i></p> <p><i>Contact person: marta.rihter@abo.fi</i></p> <p><i>Web:</i> <i>Video: <a href="https://www.youtube.com/watch?v=TPCKLID4NIA">https://www.youtube.com/watch?v=TPCKLID4NIA</a></i></p>	
<p>Current-ly is a smart power management system that can be used to control, for example, smart plugs in households. It reads the electricity prices data from various energy providers and then schedules the devices to turn on when the prices are the lowest (e.g. in the night). A web-based interface allows the user to customize the scheduling, add more appliances, and access other informative analytics to fully benefit from the spot prices contracts comprehensively.</p>		
 <p><b>GNSS</b></p> <p>Integrity Monitoring Platform</p> <p>Positioning Reliable Safe</p>	<b>S16 GNSS</b> <p style="text-align: right;">Web, IoT, Infrastructure services</p>	AA
<b>GNSS Integrity monitoring platform</b>	<p><i>Janne Hakala, Mårten Jern, Jonatan Wackström, Andreas Strandberg, Gayani Lyjanage</i></p> <p><i>Contact person: jonenyma@abo.fi</i></p> <p><i>Web:</i> <i>Video: <a href="https://abof-my.sharepoint.com/:v:/g/personal/andreas_strandberg_abo_fi/ERSWHEEAAOROhBdGjbzQwaQBkTpPRIHk7qD7-MjPTBJQgw?e=VRfNEh">https://abof-my.sharepoint.com/:v:/g/personal/andreas_strandberg_abo_fi/ERSWHEEAAOROhBdGjbzQwaQBkTpPRIHk7qD7-MjPTBJQgw?e=VRfNEh</a></i></p>	
<p>An integrity monitoring solution uses GNSS signals to detect changes or anomalies in satellite signal characteristics that could affect the accuracy of the position calculated by user equipment. Integrity monitoring is essential to any application that relies on GNSS measurements, particularly for those for which misleading, undetected errors could affect safety of life. The proposed product is a service that constantly monitors GNSS systems and their signals from a network of sensors, to be able to detect any anomalies, whether they are artificial or caused by interference.</p>		

	<p><b>S17 chatter.ai</b> <span style="float: right;">Web, Communicatin,</span></p>	AA
<p>The "Chatter" system is a web application that helps users to identify a ship that is currently communicating with them over the radio. The intention is to avoid miscommunication, reduce risk and raise awareness of the surrounding vessels at sea.</p>		
<p><i>Shahnoor, Md Shariful Islam, Jishnu Sen, Elena Ovsianikova, Md Mahub Islam, Lamin Jatta</i></p>	<p><i>Contact person: shahnoor.shahnoor@abo.fi</i> <i>Web:</i> <i>Video: <a href="https://youtu.be/U7G2mp9rOcc">https://youtu.be/U7G2mp9rOcc</a></i></p>	
<p>Verbal maritime communication is mainly done over VHF radio. To ensure safety and avoid confusion, communications from ship to shore, and ship to ship must be clear. When a ship establishes communication with a station, it generally starts by saying its ship name, and communication continues henceforth. We aim to develop a system where the caller will be identified and caller details will be shown immediately on the screen once the connection is established. Conversation history will also be provided as well as navigational maps where the location of other ships will be shown within a given radius.</p>		

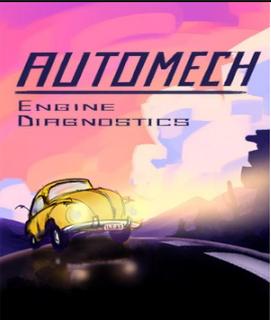
	<p><b>S18 ABPC</b> <span style="float: right;">Embedded system, Other,boat industry</span></p>	UTU
<p><b>Automatic Boat Posture Correction</b></p>		
<p><i>Samuel Addison, Joni-Miikka Merilahti, Bowen Tan</i></p>	<p><i>Contact person: jmmeri@utu.fi</i> <i>Web:</i> <i>Video: <a href="https://youtu.be/oDzBzXBat1c">https://youtu.be/oDzBzXBat1c</a></i></p>	
<p>The idea of the project was to create an algorithm that will automatically correct a boat's posture when it is unbalanced. The algorithm collects data of the boat using an inertial measurement unit and derives its posture based on this data. Then, several motors are actuated accordingly to bring the boat back to a stable position.</p>		

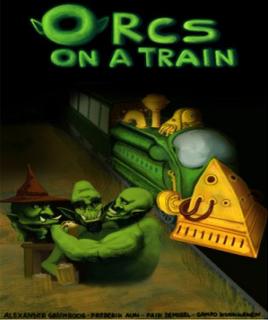
	<p><b>S19 QTMS</b> <span style="float: right;">Web,IoT, Public services,</span></p>	AA
<p><b>Queue time measurement system - measures and displays current queue times on a website for easy checking</b></p>		
<p><i>Josef Nylund, Niklas Luokkala, Frans Sontag, Alexander Weber, Charles Oredola, Fredrik Holmnäs</i></p>	<p><i>Contact person: josef.nylund@abo.fi</i> <i>Web: <a href="https://team-q.vercel.app/">https://team-q.vercel.app/</a></i> <i>Video: <a href="https://youtu.be/ZG2RLxFQi10">https://youtu.be/ZG2RLxFQi10</a></i></p>	
<p>The idea is to measure how long the queues are in the student restaurants in real-time. The goal would be to inform students how long the queues are so they can avoid long queue times by choosing another student restaurant or visiting at another time.</p>		

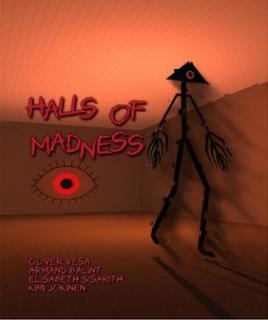
	<b>S20 Moniheart</b>	Web, Mobile, sensor Healthcare,	AA
	Personalize ECG signals using distributed system with signal based modelling capabilities		
	Jayson Fernandez, Markus Walden, Lohan Groussard, Aurélien Casteilla, Hamza Rehman, Sunny Chowdhury	Contact person: <a href="mailto:jayson.fernandez@abo.fi">jayson.fernandez@abo.fi</a> Web: Video: <a href="https://www.canva.com/design/DAFb-K_B-Wk/s6F6QqNbDlF4qnpXlUgMEw/edit?utm_content=DAFb-K_B-Wk&amp;utm_campaign=designshare&amp;utm_medium=link2&amp;utm_source=sharebutton">https://www.canva.com/design/DAFb-K_B-Wk/s6F6QqNbDlF4qnpXlUgMEw/edit?utm_content=DAFb-K_B-Wk&amp;utm_campaign=designshare&amp;utm_medium=link2&amp;utm_source=sharebutton</a>	
Heart disease is the leading cause of death worldwide. It is imperative to provide a solution that enables humans to monitor their heart health without visiting medical experts. Using Moniheart system and a wearable sensor the measurement of ECG signals and heart disease classification will be visualized, A Machine Learning model is used to calculate heart signals and predict possible heart disease of its user. The system aimed to lessen the number of people dying from heart disease and allow everyone to have a monitored heart.			

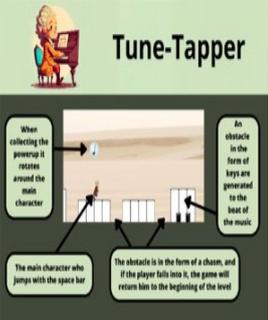
	<b>S21 UCG</b>	Desktop, Games and entertainment	UTU
	Unnamed Roguelike cardgame		
	Xuexian Chen, Juho Matikainen, Eero Nirhamo, Mikko Salonen, Janek Tuisk	Contact person: <a href="mailto:hivittavanhauskaa@gmail.com">hivittavanhauskaa@gmail.com</a> Web: Video: <a href="https://youtu.be/W-pY9dpmZW8">https://youtu.be/W-pY9dpmZW8</a>	
Enter a tournament for wizards where you will battle for the title of Champion Wizard A slay the spire inspired single player deck building game where everything is decided by drawing cards from decks.			

	<b>S22 Project Posiva</b>	Mobile, Infrastructure services	UTU
	Application for Field Observations		
	Anton Nurmiaho, Vesa Mäntysaari, Sammani Rajapaksha, Samuel Leinonen	Contact person: <a href="mailto:anton.k.nurmiaho@utu.fi">anton.k.nurmiaho@utu.fi</a> Web: Video: <a href="https://youtu.be/ftcim2q6dHM">https://youtu.be/ftcim2q6dHM</a>	
The goal of this project is to build a cross-platform mobile application that will be used by Posiva for collecting and storing field observations in Onkalo nuclear facility and radioactive waste repository. Posiva plans to get rid of paper forms and to upgrade from their current mobile application to a more future-proof solution. The new mobile application should be integrated with Microsoft 365 and developed to be as maintainable as possible by Posiva without the need for the user to have extensive knowledge of software development.			

	<b>S23 Master Torturer</b> <span style="float: right;">Desktop, Games and entertainment</span>	TUAS
Horror puzzle game with history inspired torture theme.		
<i>Krista Talvipuro, Teemu Homi, Teemu Kulmala, Gabriella Aura, Walteri Nupponen</i>	<i>Contact person: krista.talvipuro@edu.turkuamk.fi</i>  <i>Web:</i> <i>Video: <a href="https://www.youtube.com/watch?v=5tTWZ80A4T4&amp;ab_channel=TheWalttu">https://www.youtube.com/watch?v=5tTWZ80A4T4&amp;ab_channel=TheWalttu</a></i>	
Master Torturer is a horror puzzle game. Your task is to solve puzzles in historical torture chamber. Think carefully but not too long...		
	<b>S24 AutoMech</b> <span style="float: right;">Desktop,</span>	AA
Diagnostic tool for combustion engines		
<i>Adam Lindqvist, Benjamin Åberg, Jacob Rosing, Oskar Öhman</i>	<i>Contact person: adam.lindqvist@abo.fi</i>  <i>Web:</i> <i>Video: <a href="https://www.youtube.com/watch?v=FAx0HK3i-9Y">https://www.youtube.com/watch?v=FAx0HK3i-9Y</a></i>	
AutoMech is an easy-to-use software for engine diagnostics and data visualization which works by analyzing engine sounds. AutoMech is intended for all sorts of people, be they car enthusiasts or professional mechanics.		
	<b>S25 Hazard Racing</b> <span style="float: right;">Desktop, Games and entertainment</span>	TUAS
Car racing game with game events		
<i>Oskar Kjeldsen, Juho Nurmi, Joni Sjöholm, Sebastian Hagsberg</i>	<i>Contact person: oskar.kjeldsenset@edu.turkuamk.fi</i>  <i>Web:</i> <i>Video: <a href="https://www.youtube.com/watch?v=w2vwpH-otIU">https://www.youtube.com/watch?v=w2vwpH-otIU</a></i>	
Time trial based car racing game in premade level/levels where there are events and hazards that can impact one's time in the race. Player tries to get from start to finish in shortest time possible.		

	<b>S26 Orcs on a train</b> <p style="text-align: right;">Desktop, Games and entertainment</p>	TUAS
<b>Turned-based tactical game in a fantasy punk setting</b>	<p><i>Aun Frederik, Demirel Ahmed Faik, Grönroos Alexander, Kuokkanen Sampo</i></p> <p><i>Contact person: alexander.gronroos@edu.turkuamk.fi</i></p> <p><i>Web:</i> <i>Video: https://www.youtube.com/watch?v=iAQLS4WTceQ</i></p>	
<p>Turned-based tactical game in a fantasy punk setting made with Unity. A story about three orcs who end up on an ancient eldritch train, where the orcs have to fight their way out through the train and escape.</p>		
	<b>S27 SC</b> <p style="text-align: right;">Desktop, Games and entertainment</p>	TUAS
<b>Space Customs Game</b>	<p><i>Jose Salovaara, Teemu Salminen, Jani Sorvoja, Viivi Rantanen, Max Näsman</i></p> <p><i>Contact person: jani.sorvoja@edu.turkuamk.fi</i></p> <p><i>Web: -</i> <i>Video: https://www.youtube.com/watch?v=0Wwg-NzzgYM</i></p>	
<p>Game where you work as a space station customs officer and decide if you let spaceships pass</p>		
	<b>S28 Strømning</b> <p style="text-align: right;">Web, Mobile, Desktop, Cloud Games and entertainment</p>	AA
<b>Dynamic live video streaming solution</b>	<p><i>Daniel Nordström, Joar Sabel, Jens Sabel, Janina Heikkala</i></p> <p><i>Contact person: dnordstr@abo.fi</i></p> <p><i>Web:</i> <i>Video: https://www.canva.com/design/DAFceEF4P5AM/gS0-UElwgpFjA-6agUvE8A/watch?utm_content=DAFceEF4P5AM&amp;utm_campaign=designshare&amp;utm_medium=link&amp;utm_source=publishsharelink</i></p>	
<p>The Strømning project is a client-server middleware which handles the dynamic editing and creating of tiled multi-source streams. A user viewing a live event online is able to tile together which cameras/sources to view simultaneously, which are then presented as a single complete video stream.</p>		

	<b>S29 HoM</b>		Desktop, Games and entertainment	TUAS
	Halls of Madness			
	Armand-Alexandru Balint, Elisabeth Sisarith, Oliver Vesa, Kimi Jokinen	Contact person: <a href="mailto:oliver.vesa@edu.turkuamk.fi">oliver.vesa@edu.turkuamk.fi</a>  Web: Video: <a href="https://www.youtube.com/@pmnameideas5602/videos">https://www.youtube.com/@pmnameideas5602/videos</a>		
	A backrooms-inspired horror game focusing mainly on puzzles. As you venture into the endless dwelling rooms, the only thing keeping you sane is your wish to escape. Will you be able to run away from the entities present in these unending halls, complete the challenges present in these rooms and finally escape?			

	<b>S30 Tube Tapper</b>		Mobile, Games and entertainment	UTU
	2D platform game based on music rhythm			
	Md Mahbub Islam, Aku Lappalainen, Jukka Reiniharju, Maksym Rubtsov, Md Shariful Islam, Samuli Sillsten	Contact person: <a href="mailto:shariful.islam@abo.fi">shariful.islam@abo.fi</a>  Web: Video: <a href="https://clipchamp.com/watch/hJZ6k3fp5Fb">https://clipchamp.com/watch/hJZ6k3fp5Fb</a>		
	The game is something where powerups/bad things that lower your hp spawn in a certain rhythm which adds the feeling of needing to "tune tap". and if a player hits something they are not supposed to, color/shape/etc. of the character changes and vice versa for hitting something good.			

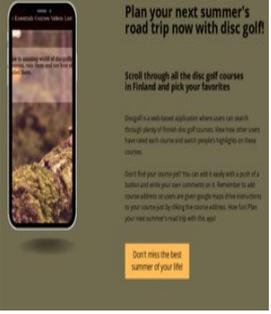
	<b>S31 Shoppe</b>		Mobile, Other,	AA
	Shoppe - Save money with every swipe			
	Gayan Kangaraarachchi, Md Montafa Tangil, Kiran Poudel, Elmita Baidhya, Jarkko Nieminen	Contact person: <a href="mailto:jarkko.nieminen@abo.fi">jarkko.nieminen@abo.fi</a>  Web: Video: <a href="https://vimeo.com/805032033">https://vimeo.com/805032033</a>		
	Helping users save money by providing access to discounted prices and deals on products and services.			

 <p>SPAT Improve your performance</p> <p>TEAM SPATIFY</p>	<p><b>S32 SPAT</b></p> <p>Web, IoT, Cloud, Other, Data management</p>	<p>UTU</p>
<p><b>Sport Positioning Åbo  Turku</b></p> <p><i>Khanh Nguyen, Jenni Kontturi, Johanna Sinisalo, Joonas Kairo, Milla Oksanen, Sagar Dhakal</i></p>	<p>Contact person: <a href="mailto:khanh.k.nguyen@utu.fi">khanh.k.nguyen@utu.fi</a></p> <p>Web: <a href="https://spat.interjektio.com/">https://spat.interjektio.com/</a></p> <p>Video: <a href="https://www.youtube.com/watch?v=mzGWnryIaQA">https://www.youtube.com/watch?v=mzGWnryIaQA</a></p>	
<p>SPAT is a sport data integration app developed in collaboration of SPAT company and SPATIFY team from University of Turku. With real-time data from modern UWB tracking technology, the app presents and manages athletic stats of a match or training session. Football coaches and players can expect an intuitive representation and a familiar game-like user experience, rather than dull numeric reports. It is a promising project of which the current target is football, especially youth training. The app will broaden to other team sports in further future.</p>		

 <p>tQit [ti-kuht] QUEUEING. SIMPLIFIED</p> <p>QUEUE UP FOR THE FUTURE</p> <p>EASY TO USE</p> <p>FLEXIBLE AND EFFICIENT</p>	<p><b>S33 tQit</b></p> <p>Web, Mobile, Public services,</p>	<p>AA</p>
<p><b>A smart phone based queue management system</b></p>		
<p><i>Sankalpa Neupane, Samuel Kouri, Daniel Lindblad, Casper Lofgren, Niclas Mohn, Richard Lundin</i></p>	<p>Contact person: <a href="mailto:sankalpa.neupane@abo.fi">sankalpa.neupane@abo.fi</a></p> <p>Web:</p> <p>Video: <a href="https://youtu.be/iAl3X6R2Yjc">https://youtu.be/iAl3X6R2Yjc</a></p>	
<p>tQit is a smartphone-based queue management system that will greatly improve the experience of people stuck in queues. The main idea is to replace current queue management systems that are used in for example banks or different government agencies with another that is much more convenient and less painful for the customer.</p>		

 <p>KIELO</p> <p>Waste sorting application</p>	<p><b>S34 Circwaste Kielo</b></p> <p>Mobile, Sustainable development</p>	<p>TUAS</p>
<p><b>Mobile application for effortless waste sorting</b></p>		
<p><i>Jarkko Heinonen, Jyri Kuivanen, Johannes Helin, Emilia Aalto, Teemu Rintala, Jenni Luotonen, Virta Reetta, Riikka Ojala</i></p>	<p>Contact person: <a href="mailto:jarkko.heinonen@edu.turkuamk.fi">jarkko.heinonen@edu.turkuamk.fi</a></p> <p>Web:</p> <p>Video: <a href="https://youtu.be/L9ZDIPcynfE">https://youtu.be/L9ZDIPcynfE</a></p>	
<p>Circwaste Kielo is a student innovation project which focuses on finding, researching and experimenting with different ways to support waste sorting through a mobile application. Some of the ideas so far have been general sorting instructions, text based search for items, local news related to waste sorting, sorting instructions from product bar codes, map for waste collection spots and trash bins, monitoring the users own waste sorting, and sharing knowledge of waste sorting benefits.</p>		

	S35 CTC		Desktop, Games and entertainment	TUAS
	Chuck the Cat, 2D			
	Anton Laaksonen, Ville Vainionpää, Nelli Heinonen, Laura Olli, Vili Vaali, Vilma-Reetta Valaskari	Contact person: ville.vainionpaa@edu.turkuamk.fi Web: Video: <a href="https://youtu.be/D2IL-GjJF1o">https://youtu.be/D2IL-GjJF1o</a>		

	S36 Disc golf application		Web, Mobile, Desktop, , Entertainment	TUAS
	Disc golf application			
	Sebastian Sopola	Contact person: sebastian.sopola@edu.turkuamk.fi Web: Video: <a href="https://youtu.be/Uv5WsuBD_sk">https://youtu.be/Uv5WsuBD_sk</a>		
	<p>Discgolf is a web-based application where users can search through plenty of finnish disc golf courses. View how other users have rated each course and watch people's highlights on these courses. Don't find your course yet? You can add it easily with a push of a button and write your own comments on it. Remember to add course address so users are given google maps drive instructions to your course just by clicking the course address. How fun! Plan your next summer's road trip with this app!</p>			

Sudoku Puzzle #14739 (Hard)

2			5		7	4		6
				3	1			
						2	3	
				2				
8	6		3	1				
	4	5						
		9				7		
		6	9	5				2
		1			6			8

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Sudoku Puzzle #5571 (Medium)

							9	3
8		5		2		6	4	
3		7		4		5		
		2	7	6				
	7	3	5					1
		1					6	
	3				4	9	7	
			3					
	4	6		5		1		8

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