

## The European Commission's STARTS Prize 2019 Awarded: The STARTS Prize goes to the innovation office "300.000 Km/s" and the designers Bjørn Karmann and Tore Knudsen

(May 20, 2019, Linz/Brussels) STARTS stands for Science, Technology, and Arts and is an initiative of the European Commission to promote cooperations between science, technology, and the arts. Part of the STARTS Initiative is the prestigious STARTS Prize, which is awarded annually by Ars Electronica from Linz and Bozar and Waag.

In 2019, the STARTS Prize in the "Innovative Collaboration" category goes to the innovation office "300.000 Km/s" in Barcelona, which has developed and successfully implemented a groundbreaking model of sustainable urban planning. Bjørn Karmann and Tore Knudsen were awarded the STARTS PRIZE in the category "Artistic Exploration" for "Project Alias," an intelligent parasite that forces smart home systems to respect our privacy.

The winners of this year's STARTS Prize can look forward to the STARTS Trophy and 20,000 euros each and are expected to attend the official award ceremony at the Ars Electronica Festival on September 5, 2019 in Linz.

The Honorary Mentions 2019 go Kate Crawford (AI Now Institute) and Vladan Joler (SHARE Lab) for "Anatomy of an AI System", Thydêwá for "Arte Eletrônica Indígena", Sabine Engelhardt for "SLAP – See Like A Pony", Eduardo Reck Miranda for "Biocomputer Rhythms", Fernando Bello, ICCCESS & Salomé Bazin, Cellule studio for "SimCath", Forensic Architecture for "The Murder of Pavlos Fyssas", BCL (Georg Tremmel & Shiho Fukuhara) for „BLP-2000 / Black List Printer“ and Jen Keane for "This is grown."

The STARTS Prize was once again offered by the Linz Ars Electronica, Bozar and Waag. This year's jury included Ferdi Alici, Francesca Bria, Rikke Frisk, Nadav Hochman, Daehyung Lee, Alexander Mankowsky, Moon Ribas and Şerife (Sherry) Wong. In total, the STARTS Prize counted 2278 entries from 88 countries.

### STARTS Prize ...

STARTS is an initiative of the European Commission to foster alliances of technology and artistic practice. One element of this initiative is the STARTS Prize. This prestigious award endowed with a total of €40,000 singles out for recognition innovative projects at the interface of science, technology and the arts—hence the acronym STARTS. It identifies and honors projects that demonstrate the successful



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interplay of science, technology and art, and have the potential to contribute to economic and social innovation. The two prizewinners each receive €20,000.

### ... and the European Commission's STARTS Initiative

This competition is held in conjunction with the S+T+ARTS =STARTS Initiative – innovation at the nexus of Science, Technology, and the ARTS – of the European Commission, which sees the digital transformation of industry, culture and society as the primary force driving new forms of collaboration that advance innovation by transcending the boundaries of disciplines and genres. The fundamental principle: effectively linking up technology and artistic practice is a win-win situation for both European innovation policymaking as well as the world of art. This initiative spotlights projects and people that can make meaningful contributions to mastering the social, ecological and economic challenges that Europe now faces.

### STARTS Prize 2019 - Grand Prize Innovative Collaboration

Awarded for innovative collaboration between industry or technology and the arts (and the cultural and creative sectors in general) that opens new pathways for innovation.

### Ciutat Vella's Land-use Plan.

Big Data, KDD and Citizen Participation to Ensure Coexistence between Economic Activity and Citizens' Quality of Life / 300,000 Km/s

1.65 million people live in Barcelona, more than 7 million visit it every year. Barcelona is the second most densely populated metropolis and one of the continent's three most visited cities. As positive as it is in terms of added value, it is challenging for sustainable urban planning. How new technologies, specifically machine learning, and citizen participation can help to make urban space still worth living in is shown by the innovation office 300,000 Km/s.

"Ciutat Vella's Land-use Plan. Big Data, KDD and Citizen Participation to Ensure Coexistence between Economic Activity and Citizens' Quality of Life" is a completely new form of urban planning. The project went through four phases, each of which was evaluated separately: research (data-driven diagnosis), co-creation (citizen participation), proposal (simulation tool) and approval (legal framework).

The research phase started in October 2016 with the preparation of four preliminary studies. The study looked at the local urban fabric, the impact of night-time noise on



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health, tourism trends and their impact on local trade. All information from these preliminary studies was then linked in a data atlas. This data atlas not only showed physical and sociodemographic characteristics, nature and extent of economic activities or routes of citizens and visitors; it also detailed health concerns for the population.

The co-creation phase was based on the research phase evaluation and focused on the involvement of residents and local business people. There were workshops, public events, interviews and discussions in online forums. The city council was also involved.

By participating in this comprehensive process of data collection, citizens not only gained sovereignty over certain data but were also empowered to participate in decisions at the local level. In turn, the city authorities were proposed a system of information and evaluation of urban planning and policies, which can be exchanged between cities.

The offer phase then zeroed in on the development and simulation of various scenarios. Models showed economic activities and the expected impacts such as noise, pollution, traffic volume, etc. The result was a master plan.

The plan was approved in September 2017. Public information about the project followed, and the feedback was reviewed and incorporated. In February 2018, the plan was finally approved and since then has helped to maintain and improve the quality of life in the urban area. “300,000 Km/s” emphasizes the role of urban planning as an instrument for placing the city above the free market as a community good. The local economy should flourish, but at the same time the citizens living here should be able to lead a fulfilled life.

“Ciutat Vella’s Land-use Plan. Big Data, KDD and Citizen Participation to Ensure Coexistence between Economic Activity and Citizens’ Quality of Life” receives the STARTS Prize 2019 for Innovative Collaboration.

The Statement of the STARTS Prize Jury:

*“In Jean-Luc Godard’s seminal 1965 film by the same name, “Alphaville” was a dystopian smart city that was optimized and consequently ruled by a central computer processor labelled “IBM.” And come the early days of the implementation (and eventual failure) of early versions of these technologies around the year 2000, smart cities were in fact presented as glitzy versions of Alphaville. In today’s*



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*updated version of Alphaville, we see Big Tech succeeding both technically and politically in applying technologies more familiar to us on our smartphones to entire city neighborhoods, namely the Toronto waterfront. Yet again as in \*Alphaville\*, a data-driven ecosystem is being erected in which the extent of citizens' participation is restricted to the mere configuration of tools that were designed and developed by overlord-like companies. And given Godard's grim vision of the data-driven city, it is no wonder that citizens across the globe today are worried by what this increasing integration of sensors and data-collection into our cities augurs for our collective futures. 300.000 Km/s represents a refreshing alternative path for smart city technologies. The Barcelona initiative wants to reverse the top down, Big Tech-led smart city approach by putting citizens first, and using arts, technology, and data science to unleash the potential of human-centered urban planning and innovation. It proposes an urban plan designed through a large-scale participatory democratic process that engages thousands of citizens via an online platform called decidim.barcelona. The objective is to then apply the learnings and insights gathered through this platform to tackle gentrification and find a balance between urban design interventions that serve tourists and the city's other commercial and economic engines, and interventions that serve the day-to-day needs of local residents. Can the digital layer influence how urban planners grapple with questions of social justice and health such that our cities champion the common good over capitalist gains for the few? Can the arts, data science, and democratic participation revive social, ecological, and economic equities in our urban spaces? In grappling with these questions, this work shows us compelling news way to meld crowdsourcing and data analysis to erect a new collective infrastructure for a shared, prosperous, urban future.“*



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## STARTS Prize 2019 – Grand Prize Artistic Exploration

Awarded for artistic exploration and artworks where appropriation by the arts has a strong potential to influence or alter the use, deployment or perception of technology.

### Project Alias

Rename your home assistant and make sure it never listens / Bjørn Karmann, Tore Knudsen

[http://bjoernkarmann.dk/project\\_alias](http://bjoernkarmann.dk/project_alias), [www.bjoernkarmann.dk](http://www.bjoernkarmann.dk), <https://twitter.com/BjoernKarmann>

“Alias” is a parasite. The kind that follows commands and helps protect our privacy. “Alias” is a device that is placed on smart home systems and controls them. If you don’t want the digital assistant to eavesdrop on us, “Alias” will sound its microphone with a constant but low level white noise. But when you want the system to listen and follow instructions, “Alias” activates it with a “wake word.” “Alias” works with a Raspberry Pi that runs a neural network to detect wake words. The entire “Alias” system is local and disconnected from the Internet.

“Alias” is inspired by fungi and viruses that infect insects and manipulate their behavior. Bjørn Karmann and Tore Knudsen have taken this—rather creepy—strategy as a model to develop their own parasite, which takes possession of smart home systems. “Alias” demonstrates how maker culture and open source can be used by consumers to regain control and wrest power back from designers and companies.

Our relationship to technology is shaped by how we use it. In the case of commercial smart products for home use, this almost always means that we are relegated to solely being passive consumers. With “Alias,” Bjørn Karmann and Tore Knudsen want to break up and redefine this balance of power. They want to address the fact that the use of intelligent technologies usually entails the renunciation of our privacy and the question of how we want to define “smart” in the future. The project “Alias” receives the Grand Prize Artistic Exploration of the STARTS Prize 2019.



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The Statement of the STARTS Prize Jury:

*„As many domains of our private and social lives are being transfigured by new technologies of identification, monitoring, analyzing, and controlling, Karmann’s fungus-looking “parasitic” device offers a poetic yet concrete DIY intervention that allows anyone to appropriate any voice-activated appliances, thus making smart assistants less invasive. As the project title suggests, Karmann effectively uses the artistic \*alienation effect\* (“making it strange,” or defamiliarization) to make the technology different and alien to us, as something to be carefully observed, learned, and potentially changed. It is a magnificent example of turning poesis into praxis, offering a balance in conveying technology’s means of communicability while effectively changing its mediality. \*Project Alias\* exemplifies how contemporary technologies—in this case, smart assistants—require that we open ourselves to the \*passive\* reception of the condition under which technology can be used: the user is used by the voice assistant in order to collect data about our private lives and environments. The medium is indeed the message, as McLuhan used to say, and we the users and our private data increasingly, and in some cases unintentionally, become the content of that message. \*Project Alias\* offers to flip these power relations on their head, allowing us a more reciprocal exchange: producing white noise to prevent the speaker from constantly listening or teaching it to recognize our voice to help secure our privacy. \*Project Alias\* breathes new life into the metaphor of the parasite by turning it into an applicable political tool, hijacking a technological “host” in order to change their operations and in turn affect their relations to their surroundings. The parasitic intervention can take one of two forms: the host might do all it can to eradicate the parasite, or it might rearrange things to \*accommodate the needs\* of the parasite. In either case, the presence of the parasite means that things cannot, and will not, remain the same. \*Project Alias\*, the jury hopes, will prompt the industry to incorporate and adjust to this parasitic disturbance and provide us with transparency and control over our own technological environments.“*



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## STARTS Prize 2019: Honorary Mentions

### BLP-2000

Black List Printer / BCL / Georg Tremmel & Shiho Fukuhara

DNA synthesizers can chemically synthesize or “print” DNA sequences. As this is still costly at present, it is usually carried out by specialized companies and sold as a service to universities and research institutions. This has had a serious side effect: the companies decide which DNA to synthesize—and which not to synthesize. There is an unofficial “black list” of potentially harmful and banned DNA sequences shared by these companies—officially for biosecurity reasons. “BLP-2000” is now developing prototype DNA synthesizers that print only blacklisted DNA sequences. However, because these prototypes are still error-prone, they repeatedly produce mutations in the physical DNA sequences. Printing out DNA from the “black list” also raises an ethical and social dilemma: Should it even be possible for the general public to print “forbidden” DNA? Or is it better to stop DIY DNA synthesis in the name of biosafety?

### Anatomy of an AI System

Kate Crawford, AI Now Institute and Vladan Joler / SHARE Lab

<https://anatomyof.ai>

“Anatomy of an AI System” consists of a large-scale map and a comprehensive treatise on the social, economic and ecological circles that draw on the use of digital assistants such as Amazon Echo. The focus is on making visible an extremely complex web that includes the consumption of resources and energy, the use of human labor and the framework conditions under which it occurs, AI applications, digital networks, and the security of our data.

### Arte Eletrônica Indígena

Thydêwá

<http://aei.art.br/>

The Arte Eletrônica Indígena (AEI) project comprised ten artist residencies in indigenous communities in northeastern Brazil. The result was electronic artworks



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that were first presented in August 2018 at the Museum of Modern Art, Salvador da Bahia, and have since toured indigenous communities. The participating artists come from Brazil, Bolivia and the United Kingdom and worked together with residents from the indigenous communities. “Arte Eletrônica Indígena” was intended to promote intercultural exchange between indigenous and non-indigenous people through artistic cooperation and to help break down prejudices on both sides, especially the prevailing opinion that indigenous peoples are backward should be called into question. The highly original artworks resulting from the project combined the concerns and practices of indigenous communities with electronic and digital technologies.

## SLAP – See Like A Pony

Sabine Engelhardt

<http://seelikeapony.blogspot.com>, <https://www.youtube.com/watch?v=2ZLkWtaCDu0>

With “SLAP – See Like A Pony” Sabine Engelhardt looks at human-machine interaction from an unusual perspective. She tries to fathom how her ponies perceive the environment in order to draw conclusions for a successful communication between humans and robots or autonomously driving cars. Her aim is to make the “sensory attention” of autonomous vehicles visible to the outside world and thus comprehensible for other road users.

## Biocomputer Rhythms

Eduardo Reck Miranda

<http://neuromusic.soc.plymouth.ac.uk>

<https://www.egconf.com/videos/eduardo-miranda-composer-professor-computer-music-eg10>

Eduardo Reck Miranda’s “Biocomputer Rhythms” is a duet for a pianist and an interactive biocomputer. The biocomputer listens to the piano and reacts to it in real time. Electromagnets set off vibrations in the strings of the piano and percussion instruments. The system uses bioprocessors made from a unicellular organism called *Physarum polycephalum*. Each of these bioprocessors works like a resistor that has a memory. The sounds of the piano are converted into voltage changes, which are then fed into the bioprocessors. The components of the bioprocessor in





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turn emit corresponding current values, which stand for commands to make certain strings of the piano vibrate or to trigger percussion beats on a percussion instrument. The bio-omputer thus uses the intrinsic intelligence of *Physarum polycephalum* to create a novel AI system called “Natural Artificial Intelligence” or “n-AI.”

## SimCath

Fernando Bello, ICCESS & Salomé Bazin, Cellule studio

[http://cellule.co.uk/design\\_for-impact.html](http://cellule.co.uk/design_for-impact.html)

How do surgeons prepare for surgery when they know that the smallest mistake could result in the death of the patient? This was a central question in the development of “SimCath,” a simulation environment in which prospective surgeons can rehearse complex operations in a low-risk environment as close as possible to real situations. All elements of “SimCath” are as small and light as possible, thus enabling cost-effective series production. The simulation environment can be easily transported from hospital to hospital, allowing teams to quickly set up a complete operation in many different contexts and configurations.

## The Murder of Pavlos Fyssas

### Forensic Architecture

<https://forensic-architecture.org/investigation/the-murder-of-pavlos-fyssas>

On the night of 18 September 2013, Pavlos Fyssas, a young Greek anti-fascist rapper, was murdered in Keratsini, a suburb of Athens. The murderer and accomplices were members of the neo-Nazi organization “Golden Dawn,” which has been committing acts of violence against migrants and political opponents since its inception in the 1980s. Because their nationalist orientation was supported by the Greek police, the criminals often escaped with impunity. “Forensic Architecture” was commissioned by the Fyssas family and their legal representatives to reconstruct the events of the night of the murder from audio and video files provided by the court. The result was a video and a report, which were finally presented to the Athens court.



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This is grown.

Jen Keane

<https://www.jenkeane.com/>

Jen Keane is a designer and researcher who works at the interface of design and science, technology and craftsmanship. Inspired by the idea of sustainability and the fascination with digital and biological tools, Jen Keane experiments with how new technologies can create a new generation of hybrid materials. She has cultivated bacteria herself and developed tools to manipulate the growth process of these bacteria so that they can be used for a new form of textile production. The result of this “microbial weaving” is a shoe whose uppers have been grown in a single, seamless piece held in place by cellulose produced by bacteria.

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European Commission: <https://ec.europa.eu/>

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<https://ec.europa.eu/programmes/horizon2020/en>

European Union: [https://europa.eu/european-union/index\\_de](https://europa.eu/european-union/index_de)

STARTS Initiative: <https://www.starts.eu/>

STARTS Prize: <https://starts-prize.aec.at>

BORZAR: <https://www.bozar.be/>

waag: <https://waag.org/>

Ars Electronica: <https://ars.electronica.art/news>

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