

SONY

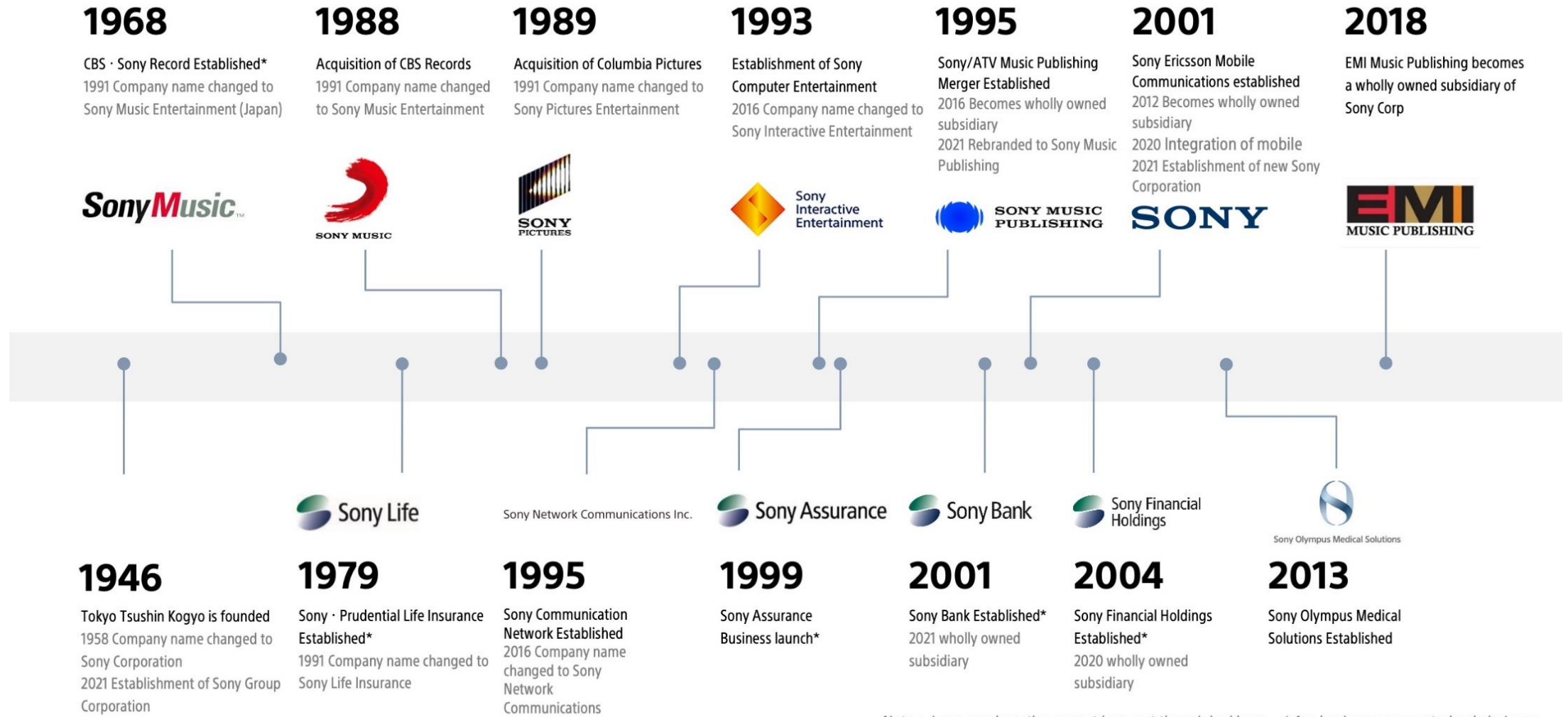
Industry Academic Collabration

Sony's Approach and Perspective



Dr. Faisal Kamran
Principle Technology Analysts
& Sustainability Strategist
Technology Partnerships Europe

Our History of Diversification



Note : Logo used are the current logo not the original logo * Are businesses operated only in Japan

Meet the Sony family

Games & Network Services



PlayStation®



Sony Interactive Entertainment

Entertainment Technology & Services



Consumer Electronics



Professional Products & Solutions



Sony Corporation

Music



Sony Music Group

Pictures



Sony Pictures Entertainment

Imaging & Sensing Solutions



Sony Semiconductor Solutions

Financial Services



Sony Financial Group

New initiatives in Sony



VISION-S

Sony's VISION-S initiative pursues the next generation of mobility.



Airpeak

Drone project in the area of AI robotics.



AI Initiatives

Sony seeks to use AI technology to unleash the potential of human creativity.



Sony Research Inc.

Pioneering the Future of Creation



Triporous

A sustainable porous carbon material made from rice husks



aibo

Autonomous entertainment robot that brings fun and joy to its owner



STARSHERE

Developing nano satellite to launch in 2022 for delivering "inspiring space experiences".



Small Optical Link for International Space Station (SOLISS)

Research on small optical link system for broad band communication in space



Sony Global Education

Mission: Creating a new educational infrastructure for a connected society



Toio™

The new, eye-opening experiences of playing with robotics toys "toio" brings out creativity in children. (Japanese Only)

Sony Space Communications

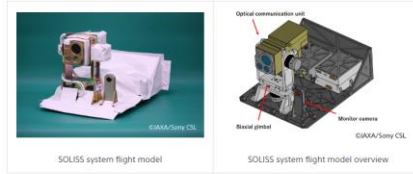
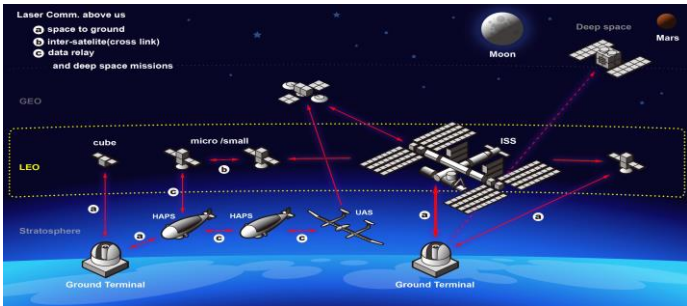
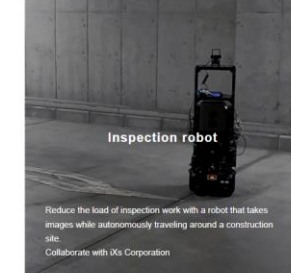
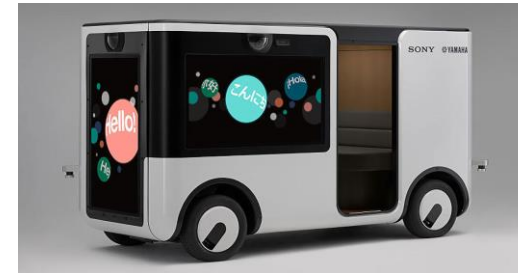
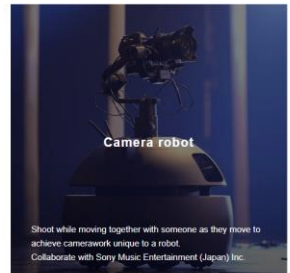
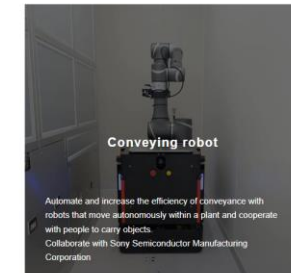


Image of the Earth taken from the monitor camera on SOLISS (sent to the ground via ISS)



SSC plans to develop small optical communications devices to provide related services to connect micro satellites in LEO via a laser beam.

Sony Mobility Inc.



The new company will develop and commercialize a mobility service platform intended to contribute to the evolution of the mobility space.



Sony Research Inc.



Research has always been at the heart of Sony.

As a wholly owned subsidiary of Sony Group Corporation, Sony Research was established in 2023 to unleash human creativity, push boundaries and move civilization forward.

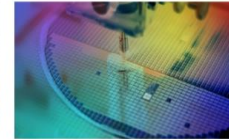
Sony Semiconductor Solutions Group



Mobility

SSS focuses on enhancing in-vehicle entertainment in addition to realizing high safety performance by making full use of imaging and sensing technology.

- Digital Video Interface (SerDes) >
- Display for Motorcycles >



Manufacturing

SSS's image sensors use innovative technology and a wide range of products to solve the problem of productivity improvement in every industries.

- Semiconductor Manufacturing >
- Electronics Manufacturing >
- FPD Manufacturing >
- Food/Medicine/Cosmetic Manufacturing >
- Heavy Industry and Civil Engineering >
- Environmentally Conscious Material >



Logistics

SSS's image sensors produce the high-quality images at high speeds required by distribution sites that demand speed and reliability.

- Logistics >



Agriculture and Farming

SSS's image sensors and OLED microdisplays solve problems in agriculture and livestock, and improve work efficiency.

- Agriculture and Farming >



Research and Investigation

SSS offers a wide lineup of image sensors with different characteristics to meet different requirements from science and technology to medical care.

- Research and Investigation >















Traffic and Transportation

SSS's image sensors with high-quality and high speed reliably capture the target even in harsh environments and promote the realization of a safe automobile society.

- Traffic and Transportation (ITS) >
- Dashcam >

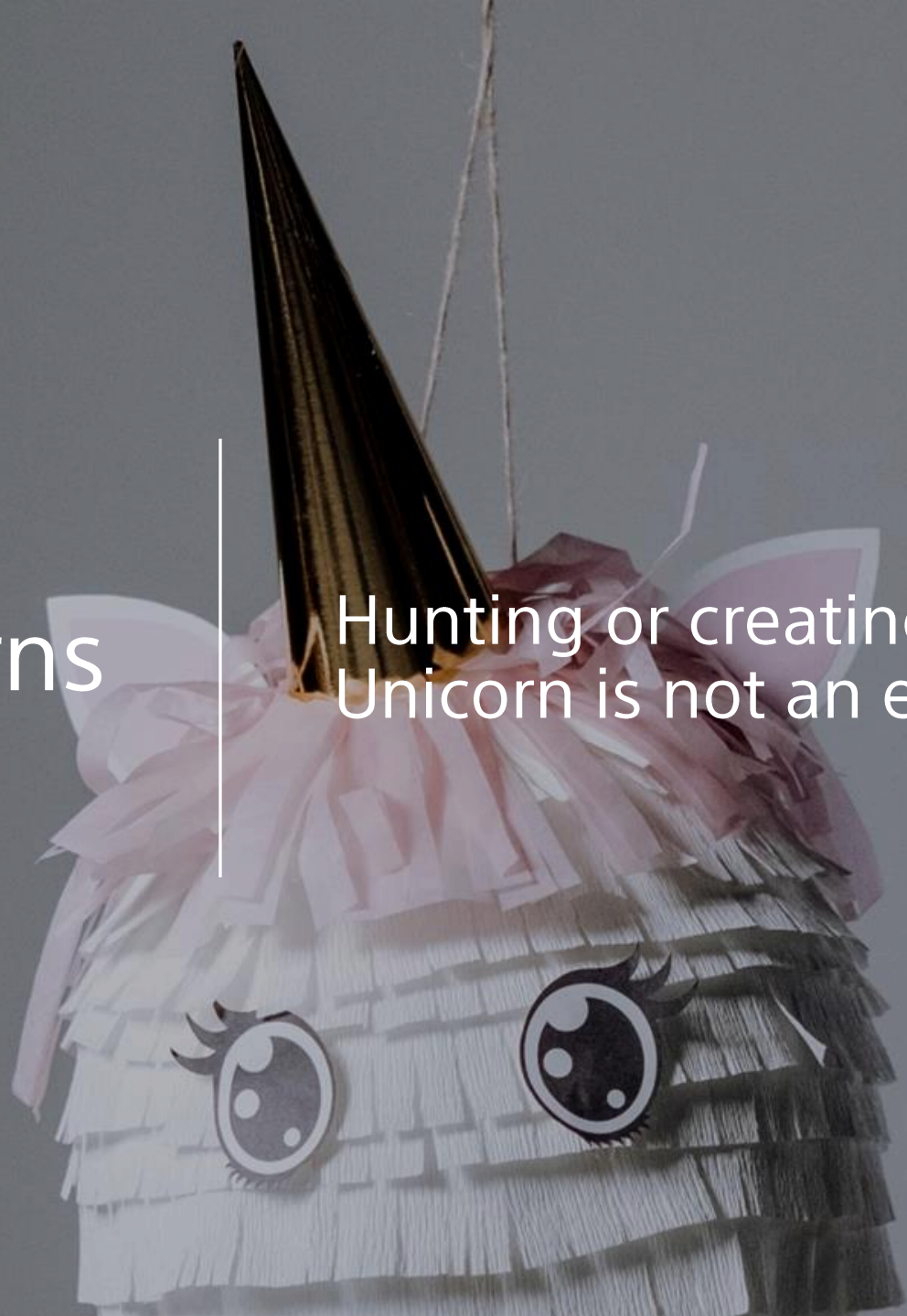
- Image Sensor
- Edge AI Sensing Platform
- LSI/IC/Module
- Microdisplay
- Board Computer
- Laser Diode
- Recycled Plastic
- MEMS Foundry Service

Sony's Research Areas

 <p>Image & Video Create super reality video experience</p>	 <p>Computer Vision & CG Break down the border between virtual and real</p>	 <p>Audio & Acoustics Control sounds freely, and create uncharted acoustic experiences</p>	 <p>AI & Machine Learning Pursue compact and high-performance AI</p>
 <p>Human Interaction Design the ultimate harmony of system and human beings</p>	 <p>Communication Connect all sort of things to deliver Reality and Real-time</p>	 <p>System Architecture & Processor Turn high-efficiency, high-reliability and low-power consumption system platforms into reality</p>	 <p>Robotics Create robots that work in collaboration with humans</p>
 <p>Display & Expression Establish new paradigms in display expression</p>	 <p>Material & Analysis Explore the mechanisms of materials</p>	 <p>Sensing Device Provide sensing technology which outperforms the human senses</p>	 <p>Life Science & Healthcare Understand the human body at the molecular level and contribute to a healthy society</p>

Unicorns

Hunting or creating the next Unicorn is not an easy task!



RIGHT PLACE.

RIGHT TIME.

A woman with her hair in a bun is wearing a VR headset and holding a controller, sitting at a desk in an office. In the background, another person is working at a desk with multiple monitors. The office has a modern, open-plan feel with exposed ceiling pipes and linear lighting.

University + Industry

Collaborations as the entry point
for students to find the best
future employer and for
researchers to find best
commercial partner



Research Award Programs

Research Award Programs provide funding for cutting-edge academic research and help build a collaborative relationship between faculty and industry researchers that could drive new technologies, industries and the future.

OUTSIDE IN

**Sony Research
Award Program**
(Corporate Program)



INSIDE OUT

Sony R&D / BUs
(Business Unit Program)

What is the Sony Research Award Program?

Faculty Innovation Award

Up to \$100K USD* in funds to conduct cutting-edge research in Sony's general areas of interest

Focused Research Award

Up to \$150K USD* in funds to conduct research in the areas of Sony's immediate interest

Submission Guidelines

Eligibility, requirements, submission protocol, and terms are explained in these guidelines.

Application Window

Proposal submission is open from:
July 15, 2023 to September 15, 2023.

<https://www.sony.com/en/SonyInfo/research-award-program/>

FACULTY INNOVATION AWARD

Global research and development at Sony enables us to foster innovative ideas, which could ultimately lead to future technology advancements and company growth. In order to speed up and expand the creation of new ideas, we would like to partner with universities and research institutes. This partnership will help cultivate advanced concepts and fertilize our own research and development. The Sony Faculty Innovation Award provides up to \$100K USD* in funds to conduct pioneering research in the areas listed below. Please select the single most relevant keyword to your submission.

- **Information Technology**

- Audio, Music, Speech, and Language Processing
- Brain Technology
- Computer Vision
- Display System
- Human Sensing and Interaction
- Machine Learning
- Planetary Sensing
- Remote and Immersive Technology
- RF Sensing
- Robotics
- Security
- Systems and Networking
- Visual/Visualization
- Wireless Communications

- **Devices and Materials**

- Analysis/Simulation/Informatics
- Microdisplay/Spatial Light Modulator
- Nanophotonics/Metasurface
- Novel Functional Devices and Materials
- Sensors for Robotics
- Sustainable Devices and Materials

- **Biomedical and Life Science**

- Cardiovascular Disease
- Neuropsychiatric Disease (Mental Health)

Shown on this page are examples of the 2022 Keywords.
NEW keywords will be announced on July 15th, 2024

FOCUS RESEARCH AWARD

Solid research is the underlying driving force to crystallize fearless creativity and innovation. While we are committed to run in-house research and engineering, we are also excited to collaborate with academic partners to facilitate exploration of new and promising research. The Sony Focused Research Award provides an opportunity for university faculty, research institutes, and Sony to conduct this type of collaborative, focused research. The award provides up to \$150K USD* in funds, and may be renewed for subsequent year(s). A list of candidate research topics appears below. Please select the Focused Research Theme for which your submission is written.

Advanced Image Processing enabled by AI



Recent advances in machine learning have created a paradigm shift for many applications. For instance, deep learning based approaches have achieved a big leap forward over the previous state-of-the-art in classification, segmentation, and recognition. Sony is looking for innovative research in image/video processing based on machine learning to significantly improve existing image/video processing techniques and applications in 3D as well as 2D.

Scope of Proposal:

- Topics of interests include:
 - Image/video generation such as text to photo-realistic image, style transfer, modal transfer based on new approach, e.g. photo-realistic image generation using neural rendering or generative transformer,
 - Image/video compression for viewing and sensing such as neural representation, deep learning hashing, generative coding,
 - Multi-view image/video generation and 3D model generation, e.g. novel view synthesis using neural rendering, neural inverse rendering,
 - Perceptual metrics for predicting photo-realistic image quality or 3D image quality,
 - Low-latency processing and complexity/computational cost reduction for the above applications, and
 - Training data creation such as CG utilization for the above applications.

Shown on this page is 1 example of the 2022 Themes.
NEW Themes will be announced on July 15th, 2024

Award winners in the Sony Research Award Program ...

2021 Award Winners (more renewals pending)

- Professor Michal Bajcsy, University of Waterloo, Canada
- Professor G. Bertasius, University of North Carolina at Chapel Hill, United States
- Professor Federico Capasso, Harvard University, United States
- Professor Li-Jing Cheng, Oregon State University, United States
- Professor Aaron Courville, University of Montreal, Canada
- Professor Jia Deng, Princeton University, United States
- **Professor Guillermo Gallego, Technische Universität Berlin, Germany**
- Professor Aditya Grover, University of California, Los Angeles, United States
- Professor Charles Hages, University of Florida, United States
- Professor Cho-Jui Hsieh, University of California, Los Angeles, United States
- Professor Dongyeop Kang, University of Minnesota Twin Cities, United States
- Professor Pan Li, Georgia Institute of Technology, United States
- Professor Jun Liu, University at Buffalo, United States
- **Professor Saturnino Luz, The University of Edinburgh, United Kingdom**
- Professor Arka Majumdar, University of Washington, United States
- **Professor Stephen Morris, University of Oxford, United Kingdom**
- Professor Aiichiro Nakano, University of Southern California, United States
- Professor Andrew Owens, University of Michigan, United States
- Professor Srijith P.K, Indian Institute of Technology Hyderabad, India
- Professor Bryan Pardo, Northwestern University, United States
- Professor Arpita Patra, Indian Institute of Science, India
- Professor Jose Principe, University of Florida, United States
- Professor Ravi Ramamoorthi, University of California, San Diego, United States
- Professor Arindam Sanyal, Arizona State University, United States
- Professor Sebastian Scherer, Carnegie Mellon University, United States
- Professor Alireza Vahid, University of Colorado Denver, United States
- Professor Sheng Wang, University of Washington, United States
- Professor Xiaolong Wang, University of California, San Diego, United States
- Professor Benjamin Williams, University of California, Los Angeles, United States
- Professor Lei Zhou, University of Texas at Austin, United States
- Professor Mohit Gupta, University of Wisconsin-Madison, United States**
- Professor Chia Wei Hsu, University of Southern California, United States**
- Professor Zhou Yu, Columbia University, United States**

Sensing Solution University Collaboration Program (SSUP)

SSUP is built around “Sensing” and “Collaboration”

The goal with the SSUP is to create innovative sensing solutions through **open collaboration** with a range of partners in higher education.

The program offers real collaboration opportunities for a network of partners, from university labs to teaching facilities. It encourages and supports research collaboration in the area of sensing solutions and promotes innovation and education.

We will support research by lending Sony Semiconductor Solutions’ sensing solutions equipment.



SPRESENSE™



Dual Camera Kit



Stereo Camera Kit



ToF Camera Kit

TTO



Tech Transfer Offices help to move from University research to Spin-Out and create your own business idea.

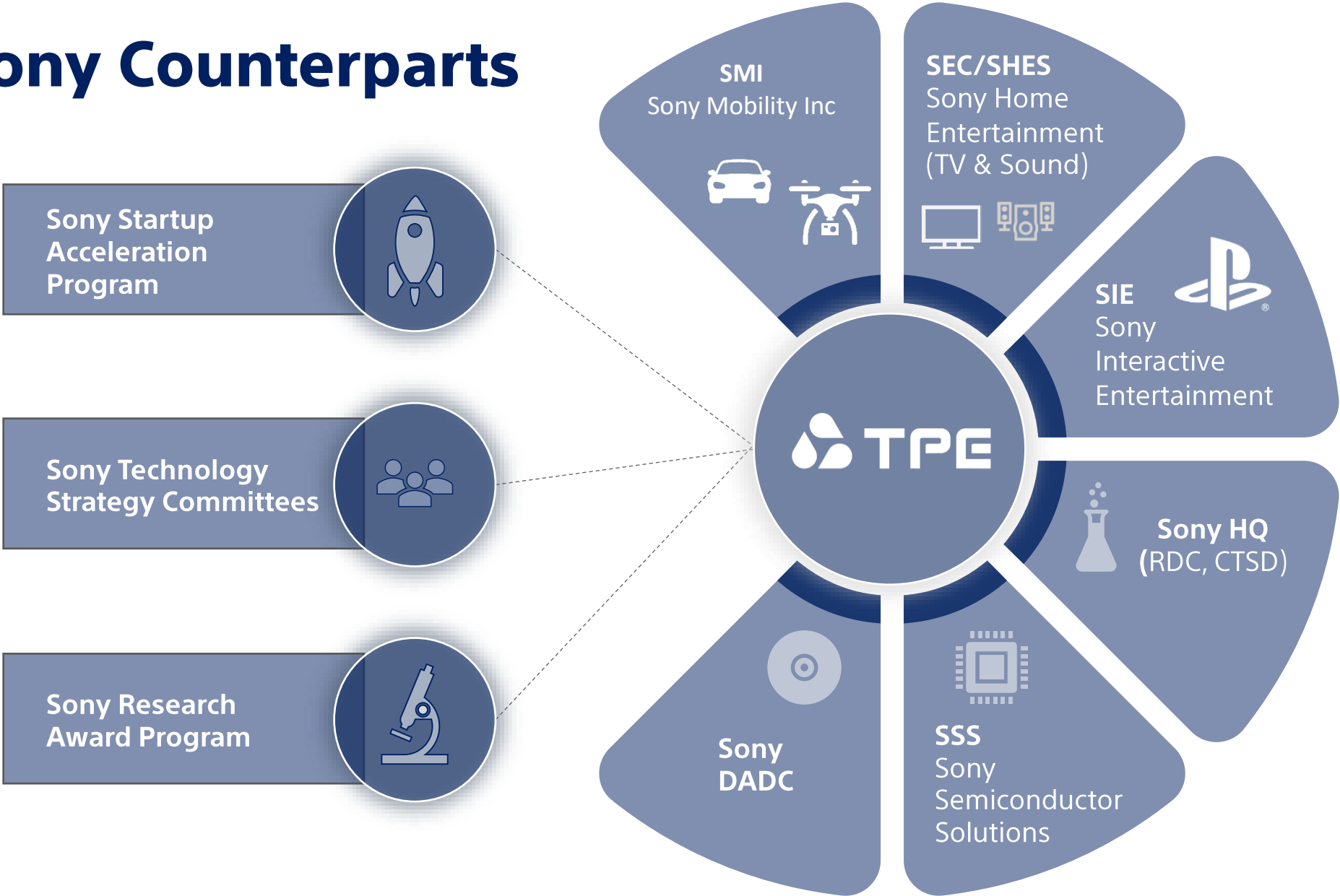
everything
is
connected

A glowing yellow neon sign with the text "everything is connected" in a cursive font, set against a black background. The sign is made of thin, flexible tubes that form the letters. The lighting is warm and bright, creating a soft glow around the edges of the tubes. The background is a solid, deep black, which makes the yellow light stand out prominently. The overall aesthetic is modern and artistic, reminiscent of mid-century modern neon signage.

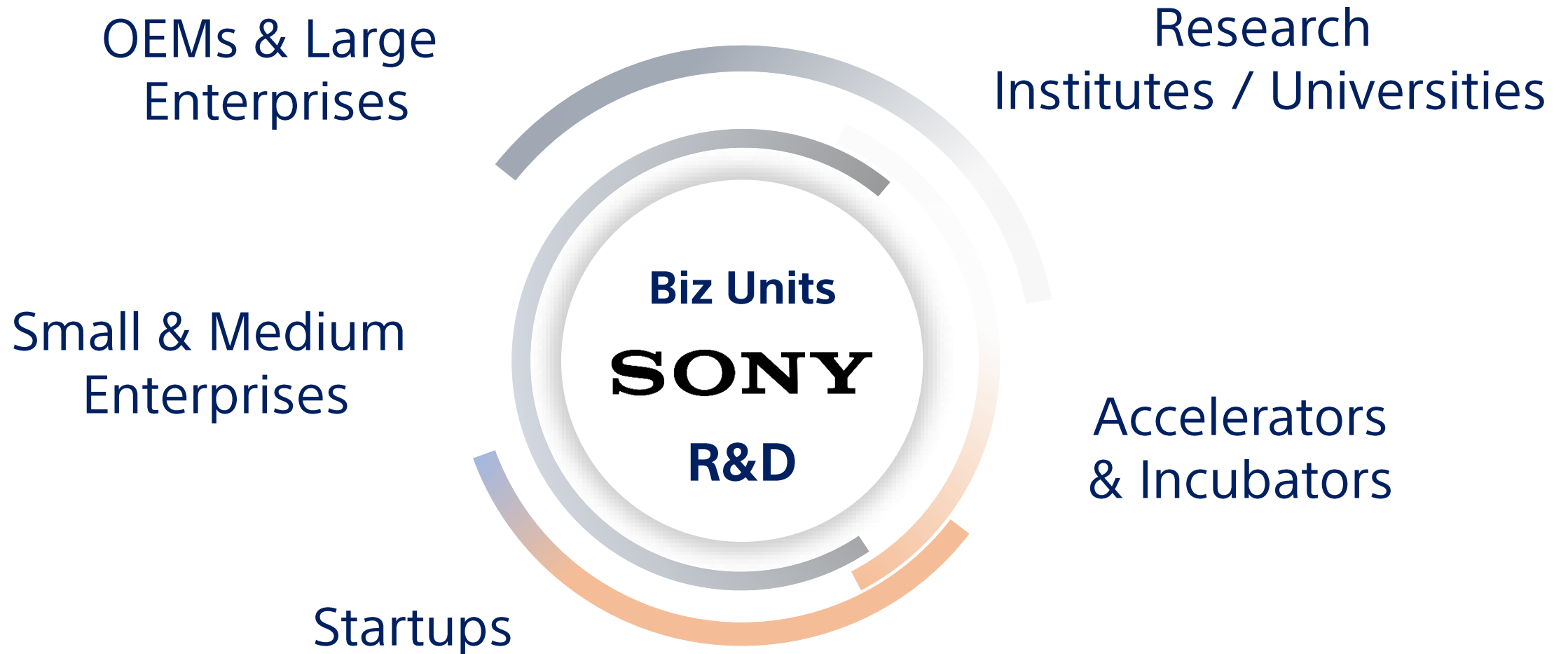
TPE: Located in Europe – scouting worldwide



Sony Counterparts



Engaging with Customers Globally



Investment Opportunities

Sony Startup Acceleration Program

Providing the environment and know-how needed to bring startups to the next level. Success is not the work of one individual – but rather a team of motivated and diverse experts sharing the same dream.

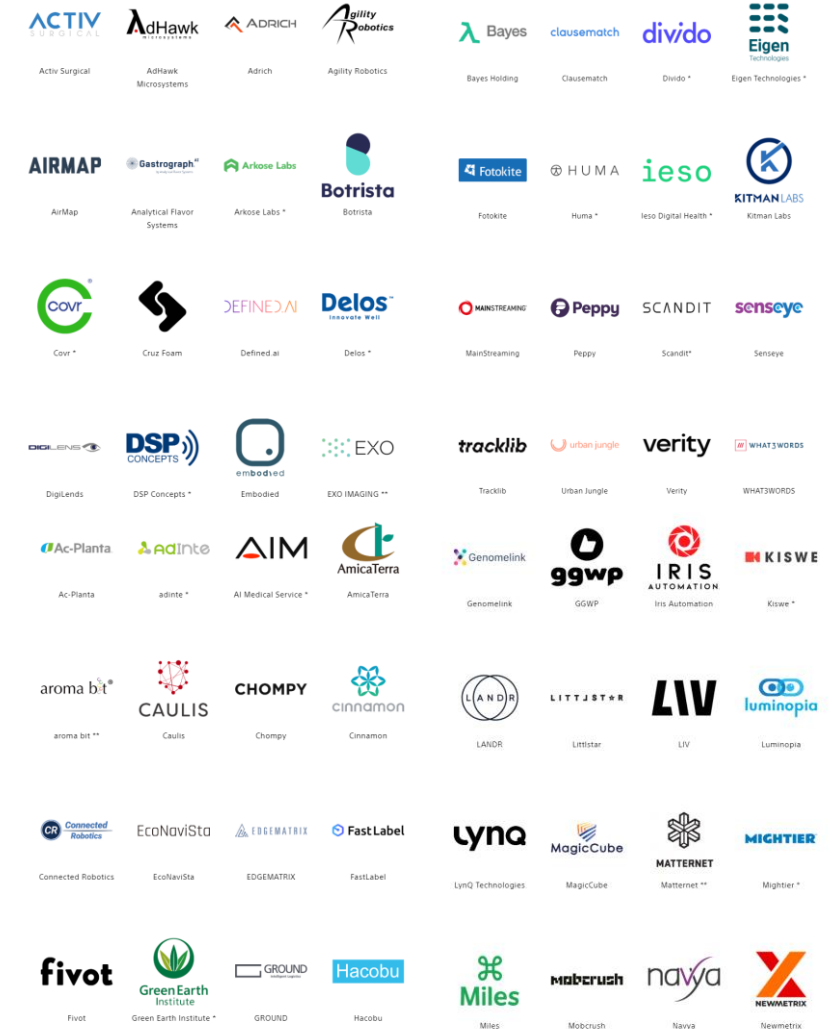
<https://sony-startup-acceleration-program-europe.com/>

AUGMENTED ROBOTICS A unique way for digitizing the toy gaming industry based on AR	EMOTAI Measures brainwaves and heart rate to help you improve esports gaming performance	GAMEBUDDY Gamifying interaction between dreamer & viewers through live Challenges	innovosens Smart bio-wearables for personalized diabetes management and sports health
Germany	Portugal	Germany	Sweden
NIAR Integrated industrial AR system designed to increase manufacturing productivity	LAVA TECH Solution to cut lighting energy consumption for indoor farming by up to 90% and increase yield by up to 20%	Soil Intelligence Robotic System System for tracking climate change effect on the food system by improving soil efficiency	Dynamic Glare control with an added communicative value. The technology can actively be utilized to create images within the glass
UK	Estonia	France	Netherlands

Sony Innovation Fund

SIF is a global team of professionals working together to manage the following investment vehicles:

- Sony Innovation Fund (SIF) is wholly funded by Sony and invests in early-stage companies.
- Innovation Growth Fund (IGF) was established by Sony, Daiwa Investment Management, Inc. to invest in mid-to late-stage companies.
- Sony Innovation Fund: Environment (SIF : E) invests in early-stage startups bringing new technologies to markets solving global environmental challenges such as climate change, resources, harmful chemical substances, and biodiversity.



SONY

How to engage with Sony?

Dr. Faisal Kamran
Faisal.Kamran@sony.com



<https://www.sony.com/en/SonyInfo/research-award-program/>

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