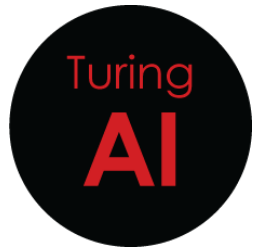


# Joint Project Opportunities

**Richard Shinn, Ph.D., Founder & CEO, AIBrain & CrossCert**

**Turing AI Cultures (Berlin) / TuringSign (Zurich · Berlin · Singapore)**

**AIBrain (Palo Alto · Seoul) / Augmented Brain Labs (Geneva)**



# 1 Turing AI / TuringSign Group: AI-powered Cultures and Secure Life Sciences



## EUROPE

Berlin, Germany (Turing AI Companies)  
**Turing AI Cultures GmbH:** AI-powered Cultures  
**Turing Crypto GmbH:** AI-powered V2X

Switzerland (Geneva, GZA/Zug):  
**Augmented Brain Labs SA** AI-augmented Brain/Gene AI  
**TuringSign Global SA:** Global PKI / CA Center  
**L'Accel:** Life Science Accelerator (f. 2023)

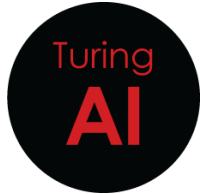
## ASIA

Seoul, Korea  
**CrossCert:** Global PKI/CA (f. 1999)  
 • 1<sup>st</sup> SoftBank funded co in Korea (2000)  
 • Market Cap \$171M, Rev \$29.2M (2021)  
 • IPO on KOSDAQ (2010)  
**AIBrain Asia:** AI Tech Co (f. 1997)

Singapore  
**TuringSign APAC**

## USA

Palo Alto, California  
**AIBrain Inc:** AI Product Co.  
**Cosmotown:** Domain / SSL



## AI-powered Cultures (Arts & Sports)

**Turing AI Cultures** Berlin, Germany (f. 2017)

- **SAIVA** (Sports AI Virtual Assistant) **AI & VR**
- AI Art NFT Platform / **AI Music Metaverse**



AIBRAIN, INC  
THE INTELLIGENT COMPANY

**AI Brain** Palo Alto (f. 2013), Seoul (f. 1997)

AI **Edu**tainment for Everyone

- **Tyche**: Incrementally learning AI Robot (2014-)
- **Gretchen**, Humanoid AI (2018-)
- **Futurable/Autonomy**: Gamifying Autonomous AI (2016-)

## AI in Life Sciences

**Augmented Brain Labs SA**

Geneva, Switzerland (f. Aug 2022)

- **(A+B)** AI-augmented **B**rain
- Genome AI Accelerator (AI app)



## Online Authentication and Trust

**TuringSign**

Switzerland (f. 2023), Singapore (f. 2022)

- PKI/CA: V2X, Satellite
- Domain & SSL AI

**CrossCert** (f. 1999, Seoul, Korea)



**TuringSign**  
Because Trust is Everything



# 3 AI In Football: SAIVA (Sports AI Virtual Assistant) / SAICA (Sports AI Coach Assistant)

We revolutionize Sports Training using AI and VR: SAIVA helps coaches, players and analysts close the Feedback loop with Video Tracking and SAICA provides actionable tactical insights for decision-making

## Problem

- Manual Coaching System
- Difficulty in Managing Data
- On-Site Feedback Loop



„The **Trainer 4.0** must be open enough to accept help in the decision-making process“  
Pascal Bauer  
(Senior Data Scientist DFB)

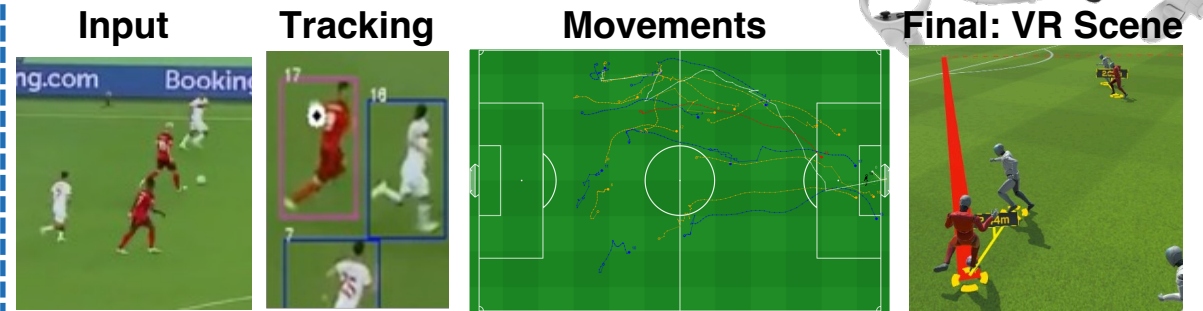
## Solution

We use AI, Video Tracking and VR as an integrated approach to data analysis to provide players, coaches and analysts with a holistic training view & insights

## Competitive Advantage

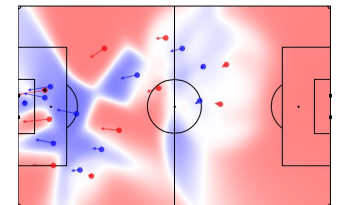
	Player Tracking Only [Intrusive - Wearable]		Player & Ball Tracking [Not Intrusive]		
High	GPS	LPS KINEXON	Optical InStat TRACK360 HAWK-EYE STATS PERFORM	Hybrid* TRACAB	Optical & VR SAIVA Sports AI Virtual Assistant
Price	wimu PRO				
Low	STATSports®			*GPS, LPS, Optical	

## Product: SAIVA (Sports AI Virtual Assistant)



## Product: SAICA

Actionable Tactical Insights for Decision-Making (Pitch Control etc.)



## Proof of Concept

The German DFB has adopted SAIVA in its A-License seminars



## Our Vision

SAIVA and SAICA to become the premier AI training solution for the German Bundesliga by 2024

# 4 AI in Arts & Music: AI-Generated Music Metaverse (WAVE)

WAVE is a Metaverse platform where users can produce music, share and collaborate while at the same time capturing monetization opportunities from IP to the music through a built-in NFT minting process

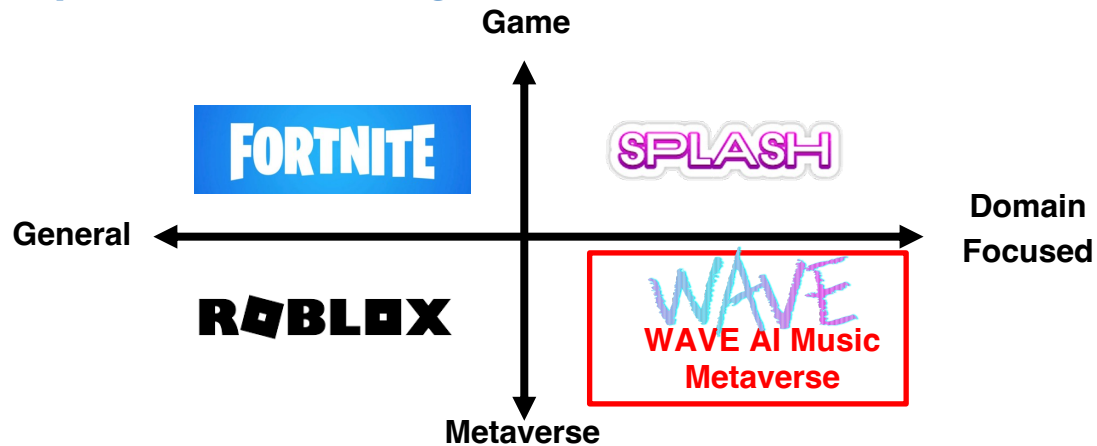
## Problem

- Low Quality of AI-Generated Music
- Unclear ownership of AI-generated Music
- No Easy way to Produce, Share, Collaborate & Sell

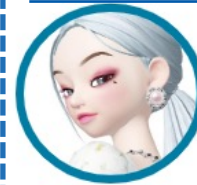
## Solution

WAVE is the World's First Virtual Music Space: Users can create their own music with AI, and benefit from ownership by minting NFTs in the Metaverse

## Competitive Advantage



## Product: WAVE



3D Avatars

Stages



Function

Music & Scripts

IMW website for music download as a reward



## Proof of Concept

- Beta version available on Roblox  
→ Wave 🎵 Find Music and Play
- Patent Pending: Establishing Ownership of AI-Generated Music through NFT Minting

## Our Vision

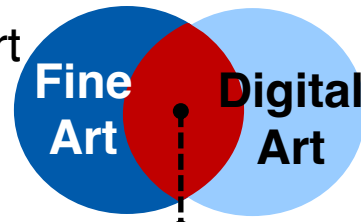
Provide a metaverse platform that democratizes music composition, creation, collaboration & monetization

# 5 AI in Arts & Music: NFT Platform (ART X ALGORITHM)

ART X ALGORITHM is an AI-powered NFT platform that bridges Fine Art with Digital Art. We automate the creation of digital derivative NFTs from traditional fine art and enable artists to enter the NFT sphere

## Problem

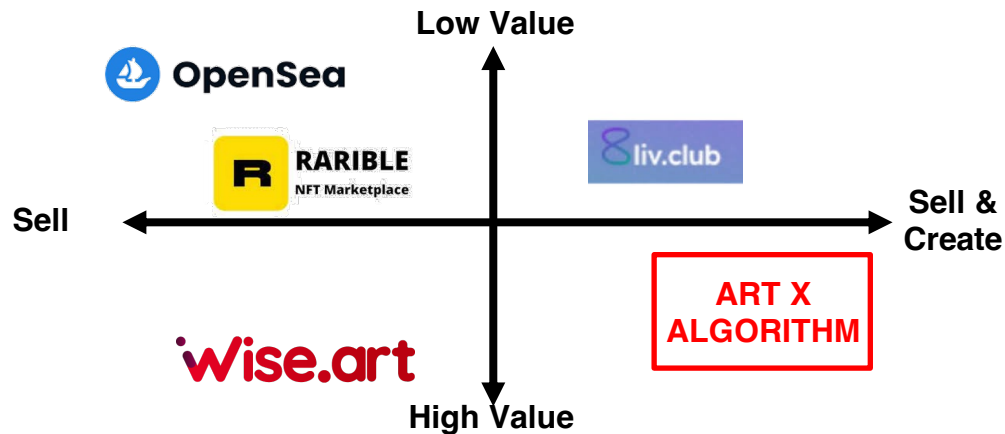
- Division between Fine and Digital Art
- Animating Fine Art time consuming
- High Entry Barriers to Digital Art



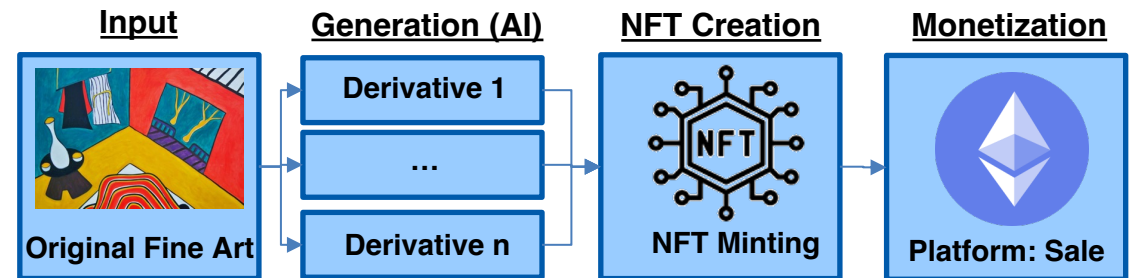
## Solution

We allow artists in traditional fine art to easily create digital derivative works and trade them on an accessible and trusted NFT platform

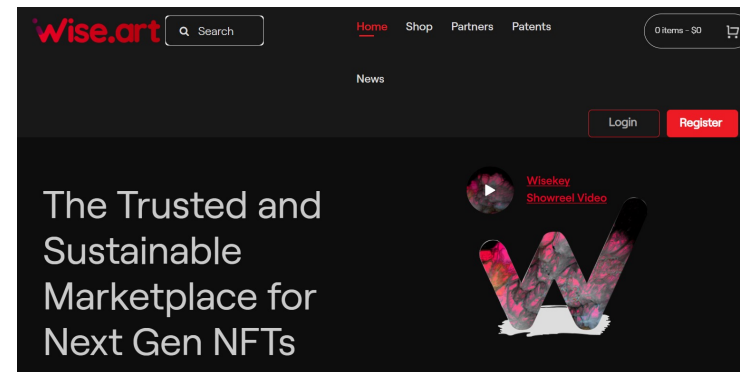
## Competitive Advantage



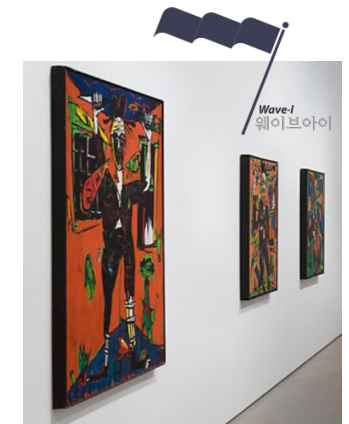
## Product: ART X ALGORITHM



## Proof of Concept



WISeKey NFT Platform



Wave-I Curation Partner

## Our Vision

Leverage AI to generate original derivative work and allow fine artists to enter the digital art NFT space

# 6 AI in Edutainment: AIBrain's AI School for Everyone

The AIBrain AI School is preparing anyone to easily transition into a career in AI. Our courses are highly accessible, hands-on and product centric: learn by examples and build your own AI product portfolio

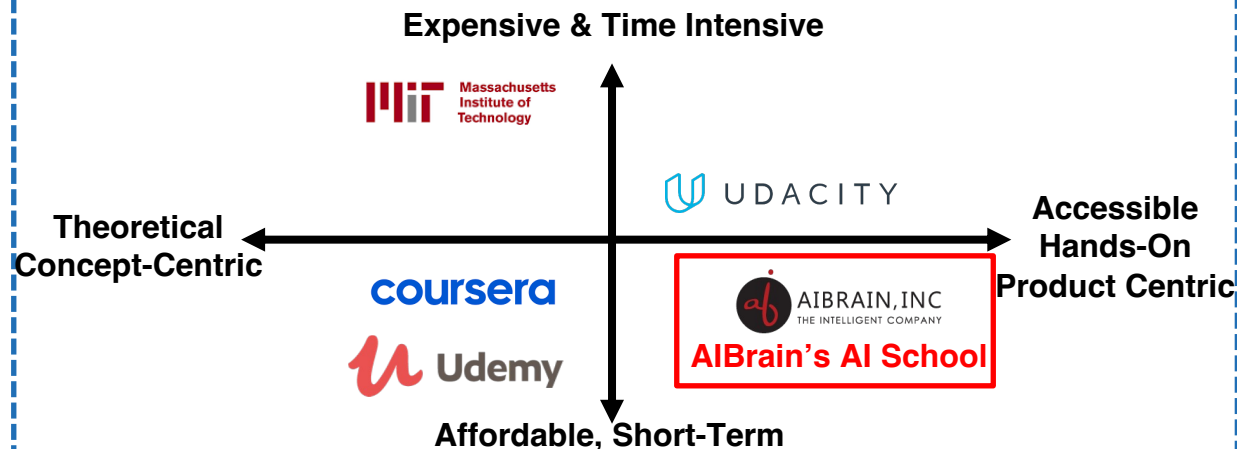
## Problem

- AI practitioner fastest growing job role in 2021
- Highest skill gap when transitioning into this job
- No simple & efficient entry point to develop AI skills

## Solution

AIBrain's AI School is the most practical entry point into a career in AI: hands-on learning (Build-your-Own)

## Competitive Advantage



## Product

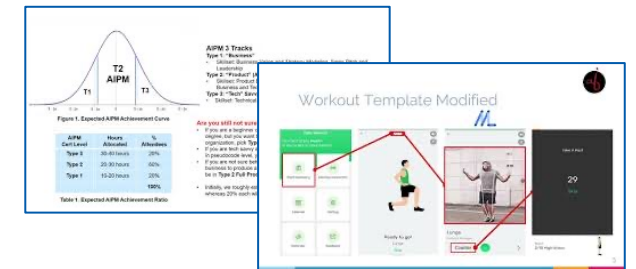
### AI Robotics Courses

Gretchen: Build Your Human-like AI



### AI Education Courses

AutoML for Beginners; AI Product Manager



## Proof of Concept

Development > Data Science > AutoML Automated Machine Learning

### Automated Machine Learning for Beginners (Google & Apple)

Learn AI: Computer Vision, NLP, Tabular Data - build powerful models with Google AutoML & Apple CreateML

4.5 ★★★★★ (123 ratings) 31,290 students

Created by AIBrain Inc.

Last updated 6/2022 English English



31,290 Students Enrolled (Feb 5, 2023)

## Our Vision

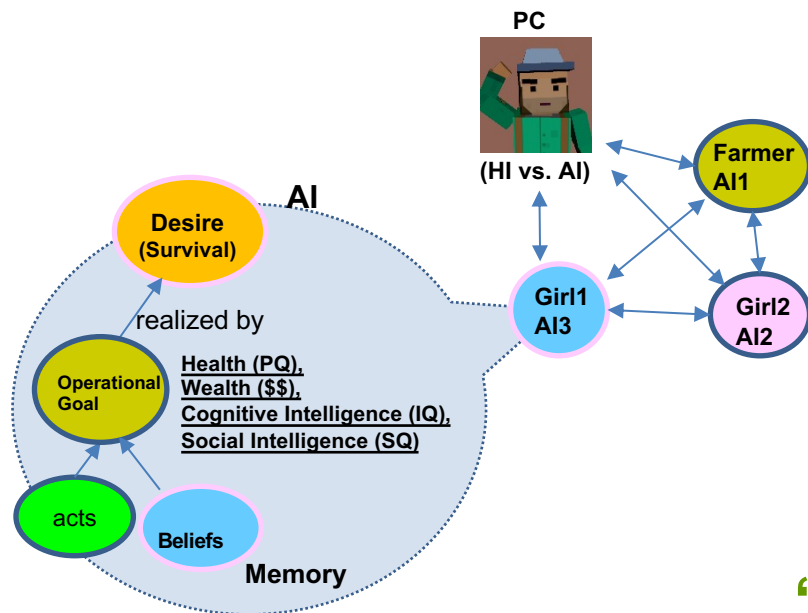
Provide a full curriculum of hands-on courses for the AI workforce of the future to acquire real-world skills

# 7 Futurable: Future Travel by AI Simulation

## Futurable 1 - Summer City [alpha] : Build a Better Future. - An autonomous AI game for future simulation.

Futurable is an AI simulation game, where every character is an autonomous entity.

An autonomous entity owns its inborn capabilities of discovering and solving its problems while learning its beliefs initially from tabula rasa by interacting with its outside world given its primitive goals of survival and prosperity. Every life is created as an autonomous entity.



Futurable 1 among the best new Indie games at the first Google Indie Games Festival • San Francisco.

September 24, 2016

<https://events.withgoogle.com/google-play-indie-game-festival/exhibiting-games/>

“Seeing is Believing!”



AIBRAIN, INC  
THE INTELLIGENT COMPANY



**Futurable 1 - Summer City [Alpha]** is a fully autonomous AI game for Future Simulation



**FUTURABLE**

## Fun to Play but Fulfilling

Current game play is often repetitive over the pre-defined alternatives leading to destined life scenarios → Boring!

Fun to guess freely based on own experiences (open-ended)  
Player could be inspired by interacting with autonomous AIs

## It is More than a Pastime! - Fulfilling

**A**wakening – Hoping for the Future

**E**nlightening – Seeing is Believing

**I**nspiring – Exploring the Future together with Autonomous AIs

## Futurable as a General MA Problem Solver

Features	GiAR Lite & Full
<b>Domain Independence:</b> Is the system independent of problem domains?	6. Implemented in PDDL and MA-PDDL
<b>Generality:</b> How many planning methods?	<b>GiAR Full: 6 methods (but soon 7)</b> GiAR Lite: 1 method (Neural Net Planner)
Does it include <b>MCTS (Monte-Carlo Tree Search)</b> ?	Yes (GiAR Full)
Deep <b>CNN (Convolutional Neural Networks)</b> included?	Yes (GiAR Lite only)
<b>Multi-agent Problem Solving:</b> Does it work with multiple agents (>2)?	<b>Yes (arbitrary number): Both</b>

**Note 1. PDDL (Planning Domain Definition Language); MA-PDDL (Multi Agent PDDL)**

**Futurable** is a showcase of **AI plug-in** for developers to **“build your own” AI games**

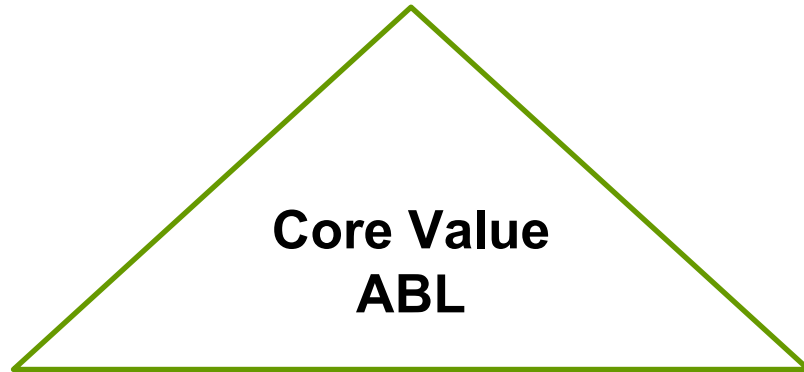
# 8 Augmented Brain Labs SA (“ABL”) (f. Aug 2022; Geneva, Switzerland)

2 Areas: AI-augmented Brain and Genome AI Accelerator Platform (GAP)



**ABL: 2 Problems**

**pHm (Personal Health Monitor)**



**GAP (Gene AI Accelerator Platform)  
accelerates the human evolution**

**AI-augmented Brain**  
Cellular Level AI Brain Integration  
aka **Brain of Theseus**

**Augmented Brain Labs SA**  
Geneva, Switzerland

**Genome AI Platform  
(GAP) Lab**

[1] AI-powered Genome  
accelerator  
[2] Swiss Innovation with EPFL  
Lausanne

**EPFL**  
EPF Lausanne

**Augmented Brain Lab**

[2] AI-Powered Brain  
augmentation  
[2] Alliance with **Campus  
Biotech /Wyss Center**

**Campus Biotech  
Wyss Center**  
Geneva, Switzerland

# 8 TuringSign Global SA: AI-powered Authentication and Security

AI-powered Authentication / Security and AI-powered domain services



Co Name: **TuringSign Global SA**  
Location: **Geneva, Switzerland**  
Initial Capital: **CHF 1,000,000**  
Foundation Date: **February 2023**

## Turing Crypto Berlin, Germany

- **V2X (Vehicle to Everything) CA for Self-driving cars:**  
- **AI-powered Misbehavior Detection w/ TU Berlin, Prof. Dr. S. Park**  
Misbehavior Detection in V2X Communications <https://www.youtube.com/watch?v=xTaksVG9Qi4>

## TuringSign Global, Geneva, Switzerland

- PKI-based Secure Satellite Communication
- SSL Website Certificate Provider
- AI-powered domain service provider



## iV2X Lab

### iVy AI-Powered V2X (Intelligent Vehicle to Everything), Multi-agent intelligence / Inter-agent communication and cooperation

**Vehicle-to-everything (V2X)** is communication between a **vehicle** and any entity that may affect, or may be affected by, the vehicle.

It is a **vehicular communication system** that incorporates other more specific types of communication as V2I (vehicle-to-infrastructure), V2N (vehicle-to-network), V2V (vehicle-to-vehicle), V2P (vehicle-to-pedestrian), V2D (vehicle-to-device) and V2G (vehicle-to-grid).

The main motivations for V2X are **road safety**, **traffic efficiency**, and **energy savings**.

The U.S. **NHTSA** estimates a minimum of 13% reduction in traffic accidents if a V2V system were implemented, resulting in 439,000 fewer crashes per year.

There are two types of V2X communication technology depending on the underlying technology being used: (1) **WLAN**-based, and (2) **cellular**-based.

**Use cases:** V2X allows **road safety** applications

- **Forward collision warning**
- **Lane change warning**/blind spot warning
- Emergency electric brake light warning
- Intersection movement assist
- **Emergency vehicle** approaching
- **Roadworks** warning
- **Platooning** (or flocking)

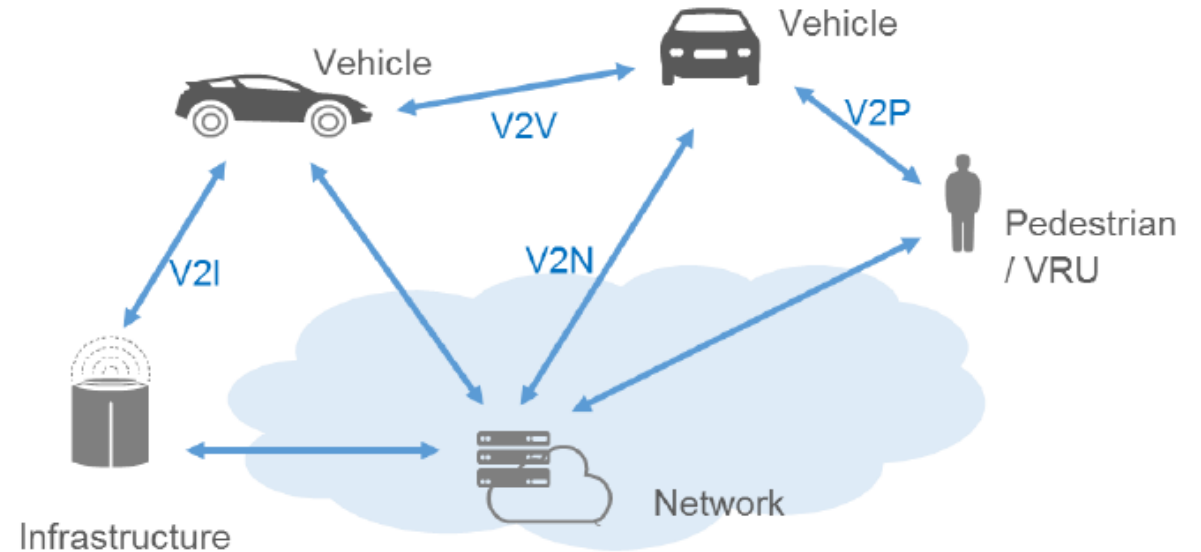


Figure 1: V2X Types.

### Car is your 2<sup>nd</sup> home.

Country	Spectrum (MHz)	Allocated bandwidth (MHz)
Australia	5855 – 5925	70
China	5905 - 5925 (trials)	20
Europe	5875 – 5905	30
Japan	755.5-764.5 and 5770 – 5850	9 and 80
Korea	5855 – 5925	70
Singapore	5875 – 5925	50
USA	5850-5925	75

# **L'Accél** GZA/Zug, Switzerland **AI-powered Life Science Accelerator**

**f. March 2023**

by ActnerLab and CrossCert

## **L'Accel (Life Science Accelerator), GZA/Zug, Switzerland**

- Bioinformatics, Life Science / Biotech
- “CheongNa” Medipolis / Life Science Park (US\$2B Project)

## **Cheongn MediPolis (US\$2B, 2021-2027, Incheon, Korea) Life Science Park (US\$500M, 2003-2007) by L'Accel with**

- Harvard's Massachusetts General Hospital
- Harvard's Gordon Center for Medical Imaging
- Korea Advanced Institute of Science & Technology
- And 800 Biotech / AI companies

## **ActnerLab**

- (2015-2022.8) 170 start-ups (77 biotech),  
Seed stage funding \$20M (\$100K each)
- \$1.5B (32 start-ups), \$500M (2 IPOs),  
1,500+ jobs, (2015-2016: 20 co's : IPO 2  
co's, IPO 8 start-ups in 2y)



We offer full/part time CXO opportunities for our various AI-powered projects. We are also interested in joint projects with your lab and would love to collaborate!

Project	You Are...	We seek...	You will...
AI Football: <b>SAIVA AI &amp; VR</b>	Faculty	CTO/Chief Technology Officer	Develop & Drive our Technological Vision & Team
		CSO/Chief Science Officer	Drive our Scientific Strategy and R&D
		DSA/Data Science Architect	Lead the Architecture of SAIVA
	Grad Student	AI/ML/DS Engineer	Develop AI/ML solutions for Tracking, Calibration, etc.
VR Engineer		Develop & Improve SAIVA VR Delivery	
AI in Art & Music <b>(WAVE, ART X ALGORITHM)</b>	Faculty	CTO	Develop & Drive our Technological Vision & Team
		CSO	Drive our Scientific Strategy and R&D
	Grad Student	AI/ML Engineer	Develop AI technologies for animating original fine art pieces
		App Developer	Help us develop the ART X ALGORITHM Mobile App
AI Edutainment <b>(AI School for Everyone)</b>	Faculty	Board Advisor	Help us build & deliver educational content effectively
	Grad Student	AI/ML Developer	Build an online AI/ML course following the cognition for the beginner to understand the easiest but the most entertaining
		Humanoid AI Robot Builder	Build a human-like Humanoid AI for education and research
Bioinformatics <b>Augmented Brain Labs</b>	Faculty	CSO/Augmented Brain	AI-augmented Human Brain
		CTO/Genome AI	Intelligent Body Monitor – Early Diagnosis of Fatal Diseases
	Grad Student	Genome AI developer	Personal Genome AI Body Monitor (app)