

InSecTT – Europe’s largest joint effort on Artificial Intelligence of Things

A new project brings two main drivers of innovation together: Artificial Intelligence and the Internet of Things.

Graz, 16.11.2020 - The pan-European project InSecTT (coordinated by VIRTUAL VEHICLE Research GmbH from Graz, Austria) unites top international industry and research partners. The project aims at creating trust in AI-based intelligent systems and solutions as a major part of the Artificial Intelligence of Things (AIoT).

Can Artificial Intelligence improve the rail capacity and strengthen Europe’s leading position in green technologies for ships and vessels? Can AI be trusted for clinical decision making in a hospital? The pan-European research project **InSecTT** is looking for answers on this and many more crucial questions. Led by VIRTUAL VEHICLE, this innovative project will bring the **Internet of Things** and **Artificial Intelligence** together – the two main drivers of innovation and industrial upgrading. It will provide intelligent, secure and trustworthy systems for industrial applications as well as comprehensive, cost-efficient solutions of intelligent, end-to-end secure, trustworthy connectivity and interoperability. InSecTT aims at creating trust in AI-based intelligent systems and solutions as a major part of the **Artificial Intelligence of Things (AIoT)**.

The game changers – Internet of Things and Artificial Intelligence

The Internet of Things (IoT) is a revolutionary change for many sectors like healthcare, building, automotive, railway, and many more: Fitness trackers measure our movements, smart fire extinguisher monitor their own readiness for action, and cars turned out to become fully connected vehicles. The availability of the collected data goes hand in hand with the development of **Artificial Intelligence (AI)** and **Machine Learning (ML) algorithms** to process them.

Despite numerous benefits, the vulnerability of these devices in terms of **security** remains an issue. Hacks of webcams, printers, children's toys and even vacuum cleaners as well as Distributed Denial-of-service (DDoS) attacks reduce confidence in this technology. Users are also challenged to **understand and trust** their increasingly complex and smart devices, sometimes resulting in mistrust, usage hesitation and even rejection. This is where InSecTT weighs in. InSecTT stands for **Intelligent Secure Trustable Things** and is a pan-European effort with 52 key partners from 12 countries (EU and Turkey). With a **budget of over 40 million Euro distributed over 3 years**, it is the newest joint undertaking in a row of successful research projects dealing with secure wireless connections, starting already back in 2014.

The next level: Artificial Intelligence of Things (AIoT)

Creating trust in and increasing social acceptance of intelligent systems is one of the major challenges to bring out the full potential of the Internet of Things. As a major part of the Internet of Things, InSecTT also aims at creating trust in AI-based intelligent systems and solutions, thus bringing the Internet of Things and Artificial Intelligence together and take it to the next level: **Artificial Intelligence of Things (AIoT)**. The Artificial Intelligence of Things (AIoT) is the natural **evolution** for both Artificial Intelligence (AI) and Internet of Things (IoT) because they are mutually beneficial. AI increases the value of the IoT through machine learning by transforming the data into useful information, while the IoT increases the value of AI through connectivity and data exchange.

Competitiveness for a strong European Industry

InSecTT fosters **cooperation** between big industrial players from various domains, highly innovative SMEs and cutting-edge research organisations and universities. The project features a big variety of industry-driven **use cases** embedded into various application domains where Europe is in a **leading position**: smart infrastructure, building, manufacturing, automotive, aeronautics, railway, urban public transport, maritime as well as health.

InSecTT solutions will be demonstrated in **real-world environments** like airports, trains, ports, and the health sector. This will generate huge impact on both high and broad level, going from citizens up to European stakeholders. InSecTT will bring **intelligent solutions** into the market by conclusive showcases all over Europe, hence strengthening Europe's industry and once more make European solutions a frontrunner in cutting-edge technology.

InSecTT will open **new market opportunities** for the European industry, will significantly reduce time to market and decrease costs for trustable Artificial Intelligence of Things solutions. The project will establish the EU as a centre of intelligent, secure and trustworthy systems for industrial applications enabled by a strong industry with a strong reputation and an informed society. By its completion, it will enable products and services based on AI compliant to **European values** and **"Made in Europe"**.

Overall Objectives – increasing trust step by step

InSecTT stands for **Intelligent, Secure, Trustable Things** applied in industrial solutions for the European industry throughout the whole Supply Chain. More precisely:

- Providing intelligent processing of **data applications** and **communication characteristics** to enable real-time and safety-critical industrial applications
- Developing industrial-grade secure, safe and reliable solutions that can **cope with cyberattacks** and difficult network conditions
- Providing measures to **increase trust** for user acceptance, make AI/Machine Learning explainable and give the user control over AI functionality
- Developing solutions for **Internet of Things**
- Providing **re-usable solutions** across industrial domains
- Methodological approach with the **Integral Supply Chain**
- Focus on **robustness and ethics**, ensuring that developed systems are resilient, secure and reliable, while prioritising the principles of explainability.

Statement Dr. Michael Karner, InSecTT Project Coordinator:

InSecTT is a huge step forward in the area of trustable intelligent solutions. Several industry-driven research and innovation actions (RIA) such as DEWI or SHIELD, and innovation actions such as SCOTT provide a sound basis to build upon. InSecTT now is consistently going a significant step further: based on the results of the predecessor projects, InSecTT aims at local use of trustable intelligent solutions in mainly wirelessly connected elements of the “Internet of Things” for industrial applications. With the support of Europe's industry, Europe's leading Research Organizations, the European Union via the ECSEL Joint Undertaking and the participating national funding authorities like FFG in Austria, it is possible to bring together European and International key players in a project like InSecTT.

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VIRTUAL VEHICLE

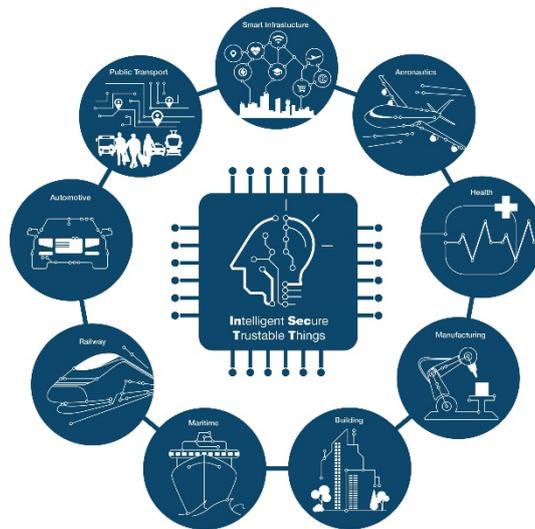
The Virtual Vehicle Research GmbH is Europe's largest R&D center for virtual vehicle technology with 300 employees. Research priority is the linking of numerical simulations and hardware testing, which leads to a powerful HW-SW whole system design and automation of testing and validation procedures. Following this focus on industry-related research VIRTUAL VEHICLE is the innovation catalyst for future vehicle technologies.

The international partner network of VIRTUAL VEHICLE consists of around 100 national and international industrial partners (OEMs, Tier 1 and Tier 2 suppliers as well as software providers) as well as over 40 national and international scientific institutions.

DOWNLOADS



[Focus of InSecTT: Artificial Intelligence of Things in Everyday's Environments](#)



[InSecTT Industrial Domains](#)