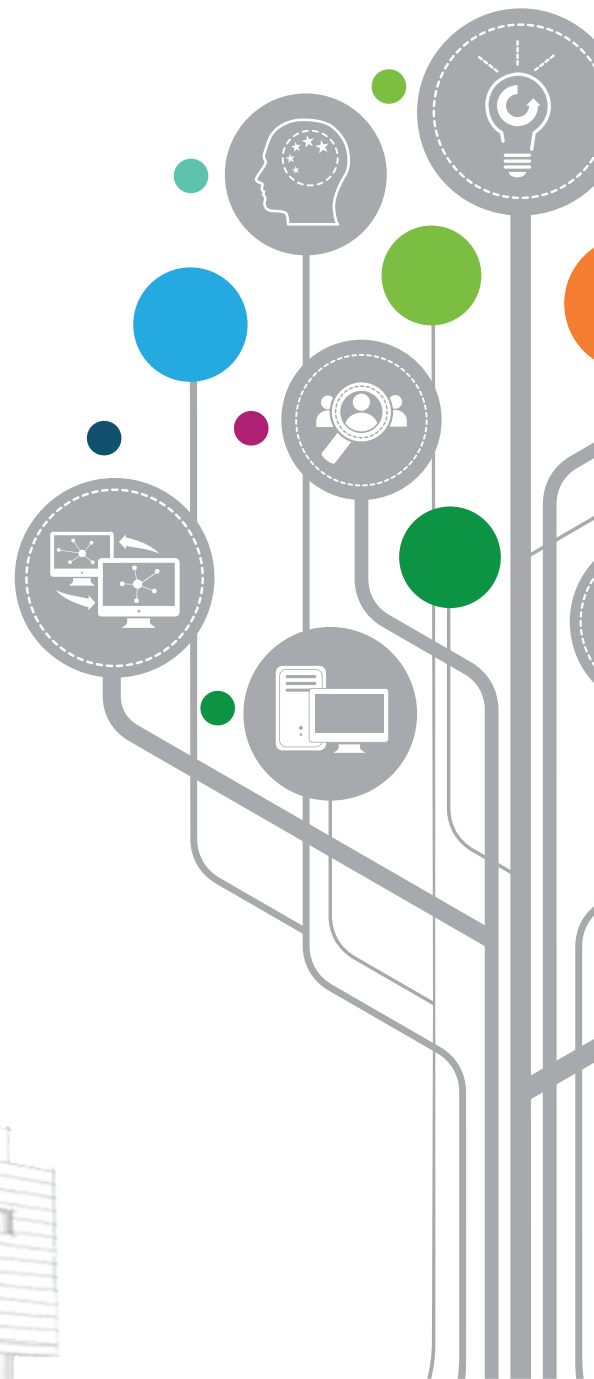# TSSG

Shaping future
Innovation

TSSG is an internationally recognised centre of excellence for ICT research and innovation. We carry out a wide spectrum of industry-informed research in Information and Communications Technologies (ICT), particularly technologies enabling communications and information services.

Our four key prioritised technical Research areas include Mobile Platforms and Services, Security Privacy and Identity, Data Analytics and Social computing, Adaptive Networks and services. We create economic impact by translating our knowledge base and innovation into leading edge products and services by continuing our engagement with Industry in collaborative R&D, knowledge generation and transfer.

Over the past five years, TSSG has delivered innovative solutions to over 110 Irish companies, and has created 16 spin out companies in Ireland including the award winning FeedHenry, a groundbreaking mobile cloud platform company, and ZolkC, a leading provider of mobile technology for international visitor attractions and KodaCall a new 'Click to Call' Technology.

Since our foundation in 1996, we have become an important catalyst for driving economic change in the South East region, transforming brilliant research ideas into start-up companies. TSSG, the ICT centre of excellence currently consists of over 100 research scientists and engineers, and manages an active international network in excess of 450 partners from industry, academic and research institutes spread across 35 countries worldwide.

TSSG Building - TSSG, Waterford Institute of Technology, West Campus, Carriganore, Co. Waterford, Ireland.

IDEAS
Novel Research @
Innovation % FeedHenry
Students
Social Kodacall
Global ZolkC
Partners
Science :))
SPINOUTS
DESIGN / DEVELOP

Vision

It is our intention to create a technology ecosystem, combining education, research and innovation through research in science, engineering and entrepreneurship, to create a world class centre of excellence in technologies enabling communications and network services, which will deliver real economic value to the long term competitiveness of Ireland.

Within this eco-system, we aspire over the next 20 years to be the catalyst for the creation of a cluster of high-tech companies that employ highly skilled people in the region, many of which gain their competitive edge through collaborating and utilizing the scientific and engineering IP developed by TSSG's globally recognized researchers.

Impact

TSSG aims through collaboration with industry, to double its research funding under the Horizon 2020 programme, which will impact greatly on the Irish economy.

Our aim is to work closely with industry to create almost 600 new jobs through the development of our core research, strong connectivity with indigenous industry and large multinationals, supporting high potential start-ups & partnerships with other institutes. We have created a critical mass of ICT industries in the South East of Ireland & continue to be a hub for ICT excellence in Ireland.

Funding

All of TSSG's research activity is funded via projects.

TSSG competes for collaborative tenders won in competition with other leading academic and industrial research centres and groups across Ireland and Europe.

TSSG is funded through Irish HEA, Science Foundation Ireland (SFI), European Union Framework Programme FP6 & FP7 funding, and Enterprise Ireland (EI) commercialisation funds, along with direct funding from Industry.

Research

Over the course of 15+ years TSSG researchers have focussed on the software used to control and manage communications networks of all types and the software used to provide platforms for the delivery of innovative communications services.

Currently the group is addressing the following research challenges:

Network Architectures
What abstractions best realise the potential of nascent network virtualisation technologies?

Management Techniques
What algorithms, protocols and tools do we need to manage programmable networks in a scalable manner?

Information Security
How do we ensure that networks and the services they support are properly protected from security threats?

Engineering Services
What design patterns, tools and methodologies do we need to better engineer communications services?

Harnessing Data
How do we harness the data flowing through networks to optimise those networks and provide value to service users?

Connecting Europe to the world

TSSG World Links

To address these challenges we undertake projects that take both a longer and shorter term views. Central to our ethos is the belief that innovation arises at all stages of the R&D path, be it from the work of PhD students investigating blue sky ideas, from teams of researchers collaborating in large scale European Commission funded projects, or from engineers developing pre-commercial prototypes of novel services in partnership with start-up companies.

Moreover, wherever possible we seek to operationalise our solutions. That is we will deploy our solutions in test-beds, in operational networks, in production codebases; we will observe their operation; and we will iteratively improve our solutions based on the insights gained.

Culture

We have created an environment that encourages creativity and extraordinary thinking. Through individual autonomy and structural transparency, every staff member, student, researcher and entrepreneur in the organisation is given the opportunity to perform groundbreaking research – and is expected to deliver an extraordinary performance.

Innovation & Commercialisation

TSSG believes that great academic research should achieve marketplace commercialisation through practical application. TSSG's mission is to leverage the excellence in science, technology, innovation and entrepreneurship of the entire organisation to deliver innovative research and commercial results. Over the last three years TSSG Innovation and Commercialisation Centre (TICC) has worked with over 110 industry partners on innovation projects.

TSSG has been involved in creating 16 start up companies in the past 5 years. These companies are based on TSSG's knowledge, skills and technology developed and transfered into startups such as FeedHenry Ltd., ZolkC Ltd. and Kodacall Ltd.

Companies that enter into strategic partnerships with the TSSG gain access to world-class knowledge, expertise, resources, technologies and facilities. We promote intellectual exchange and technology transfer with a view to building long lasting, mutually beneficial relationships.

" TSSG has delivered industry impact for over 110 Industry partners over the past 5 years. Through collaborative research programmes, contract research and consulting, we deliver leading edge research and consulting to our industry partners. "

– Barry Downes, CEO of TSSG

Contact us

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An tÚdarás um Ard-Oideachas

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EUROPEAN UNION
STRUCTURAL FUNDS

ENTERPRISE
IRELAND

SEVENTH FRAMEWORK
PROGRAMME