

## SFI CONNECT Sustainable IoT Overview



CONNECT is the world leading Science Foundation Ireland Research Centre for Future Networks and Communications. CONNECT is funded under the Science Foundation Ireland Research Centres programme, which has established a network of SFI Research Centres focusing on key research areas in Ireland.

SFI CONNECT focuses on six research themes looking to the next generation of networks: Sustainable IoT, Dependable Networks, Link Performance, Customised Networks, Data Driven Optimisation and Management, and The New Operators.

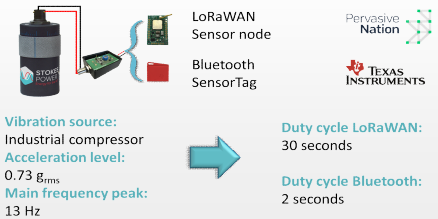
- The CONNECT Sustainable IoT research theme explores four specific challenges involved in building sustainable IoT devices:
- Energy harvesting and storage, with power-management algorithms to allow the device to be completely energy autonomous for its entire lifetime
  - Efficient protocols and networking principles for connecting devices at the edge to the network
  - Highly reconfigurable software-defined devices based on low-power platforms, which can be reused for new use cases by changing, for example, communication protocols and sensing algorithms.
  - Resilient security mechanisms beyond classical cryptography to address future threats

### Examples of CONNECT Collaborations

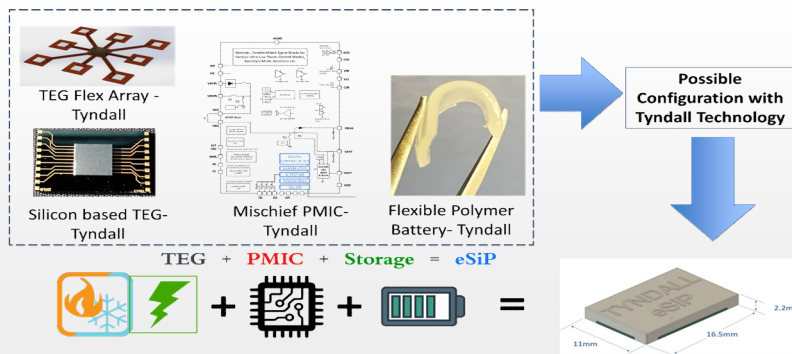
#### Collaboration Energy Harvesting Testbed (Tyndall National Institute)



#### Vibrational energy harvesting for Industrial IoT Applications (University of Limerick)




#### Energy Source in Package (eSIP) (Tyndall National Institute)



#### Work with CONNECT

CONNECT researchers understand impact. We have considerable experience of strong engagement with industry as evidenced by the large number of partners who have chosen to join our team. In addition, our researchers have a strong record in the production of technology licenses and spin out companies. CONNECT provides tight project management of all research conducted in collaboration with our industry partners. Our dedicated Industry Programme Managers work with our Industry Advisory Board, Targeted Project Committee, and Testbed Management Committee to provide strong oversight of this work.

HOST INSTITUTION



Trinity College Dublin  
 Coláiste na Tríonóide, Baile Átha Cliath  
 The University of Dublin

PARTNER INSTITUTIONS

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