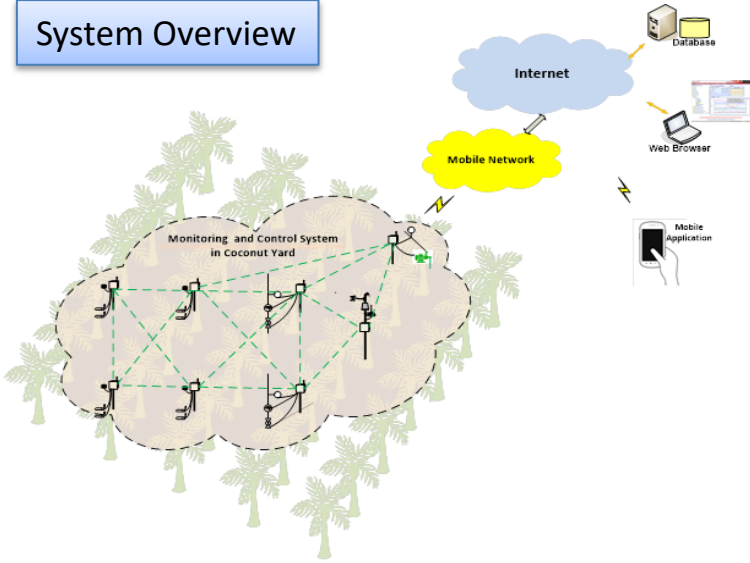


The plant watering system lies at the heart of agriculture since it directly affects product yields, as well as the quality of products. Since controlling when plants should be watered and determining how much water the plants need concerning the current environmental conditions are crucial not only for the plant growth but also for the effectiveness of water use, therefore the objective of this project is to implement and test a prototype of a **smart watering system** based on the concept of *'mesh-topological, low-power wireless network platform.'*

The prototype of the proposed platform consists of a control node, sensor nodes, and irrigation-valve-controller nodes. Also, this platform includes a gateway that relays collected data to a (cloud) database.

The platform functions as follows. The sensor nodes collect data about environmental parameters, such as soil moisture, temperature, and precipitation, and send them to the control node. The control node analyzes the received data together with the plant profile and sends commands to the irrigation-valve-controller nodes in order to water the plants. All collected data are relayed via the gateway to the (cloud) database.

## System Overview



Name/Position/Institution	Name/Position/Institution	Name/Position/Institution	Name/Position/Institution	Name/Position/Institution
U. Lewlomphaisarl/ Project Leader/ NECTEC, Thailand	M. F. Ibrahim (Ph.D)/ Engineer/ DAA, Brunei Darussalam	T. T. S. Nyunt (Ph.D)/ Professor/ UCSY, Myanmar	K. Rungprateepthaworn/ Researcher/ NECTEC, Thailand	W. Naruephiphat/ Research Assistant/ NECTEC, Thailand
Y. Owada (Ph.D)/ Senior Researcher/ NICT, Japan	S. H. S. Ariffin (Ph.D)/ Associate Professor/ UTM, Malaysia	K. Tungpimolrut (Ph.D)/ Executive/ NECTEC, Thailand	T. Duangtanoo/ Researcher/ NECTEC, Thailand	T. Fongjun/ Senior Research Assistant/ NECTEC, Thailand
G. Sato (Ph.D)/ Researcher/ NICT, Japan	N. E. Ghazali (Ph.D)/ Senior Lecturer/ UTM, Malaysia	S. Sartsatit/ Senior Researcher/ NECTEC, Thailand	A. Leelayuttho/ Researcher/ NECTEC, Thailand	P. Tiwatthanont/ Research Assistant/ NECTEC, Thailand
W. S. H. Suhaili (Ph.D)/ Senior Lecturer/ UTB, Brunei Darussalam	K. T. Mya (Ph.D)/ Professor/ UCSY, Myanmar	R. Keinprasit (Ph.D)/ Senior Researcher/ NECTEC, Thailand	C. Charnsripinyo (Ph.D)/ Specialist/ NECTEC, Thailand	J. Karnjana (Ph.D)/ Researcher/ NECTEC, Thailand