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IoTTask

A roadmap to Innovation of Things™

**The case of digital land
administration systems**

**Thanos Yamas, Managing Partner -
IoTTask LLC**

A FEW WORDS ABOUT ...

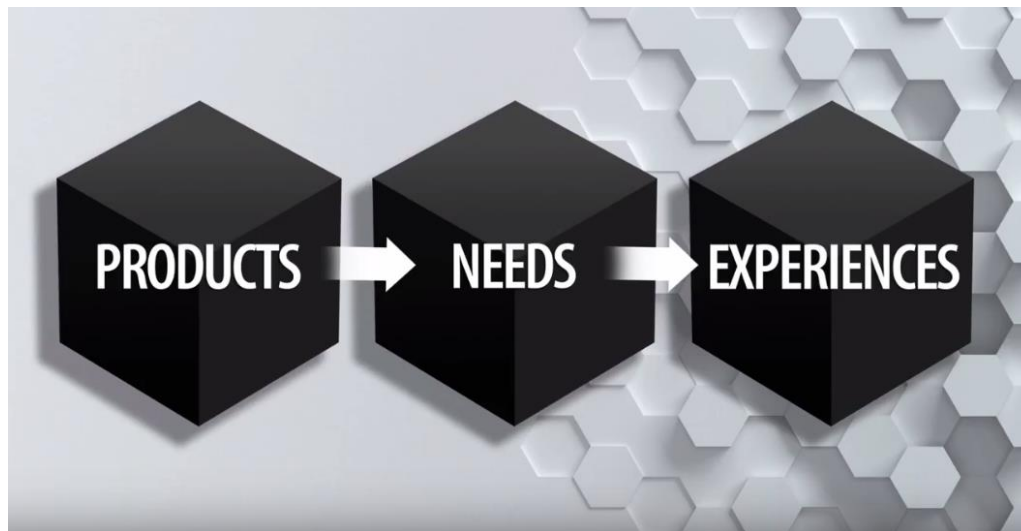
IoTask

**WE ARE A STRATEGY & INNOVATION CONSULTING COMPANY
WORKING ON THE TRANSITION FROM A TECHNOLOGY-DEFINED WORLD TO**

A VISION-DEFINED WORLD

OUR PHILOSOPHY:

**A NEW PARADIGM ARISES IN WHICH A ORGANISATION'S MISSION AND CORE
COMPETENCE ARE DEFINED NEEDS-FIRST, RATHER THAN PRODUCT-FIRST**



A FEW WORDS ABOUT ... **IoTTask**

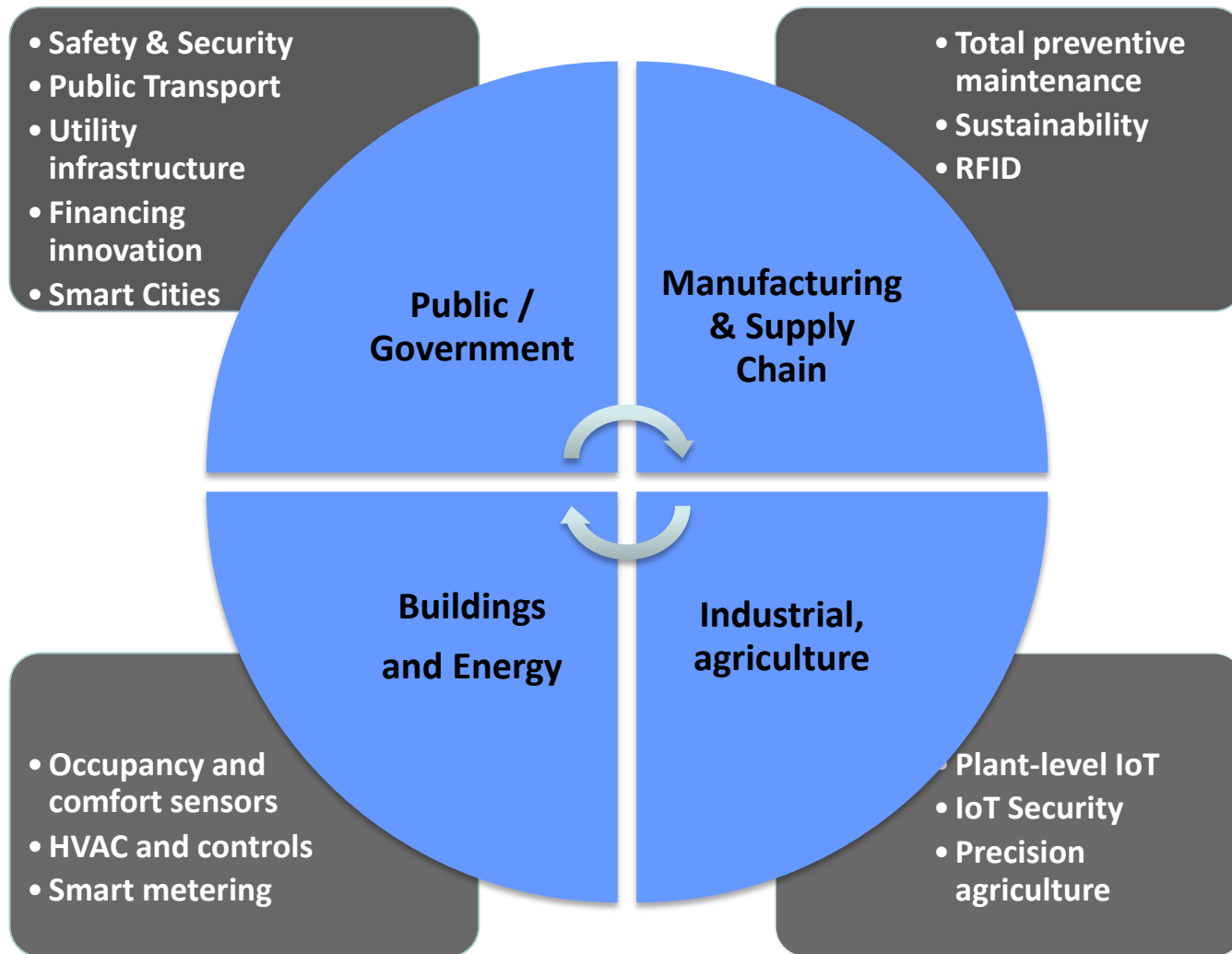
THE STAGES OF IoT



GLOBAL FOOTPRINT



MULTIPLE VERTICALS, INDUSTRIES & APPS



UNIQUE CORE TEAM

Sanjay Sarma

Partner, IoTask

- Vice-President & Professor of Mechanical Engineering at MIT, USA
- Father of RFID – Key developer of the field of IoT
- Advisor to several national governments and global companies.
- Board Director and Advisor of several companies
- Ph.D. U. Cal Berkeley, B.Tech IIT

Linda Bernardi

Partner, IoTask

- Entrepreneur in areas like IoT, Cloud Computing, Big Data Analytics & digital/social media applications
- Angel investor, board chair & member in a number of tech companies as well as not for profits globally
- ex-Chief Innovation and Disruption Officer for IBM
- Lecturer & Author of “ProVoke”
- Strategic & Innovation advisor for large enterprises & governments worldwide
- M.A., UCLA

Gitanjali Swamy

Managing Director, IoTask

- Director of Special Projects PCRI, Harvard, Board Member NCEI and Berkeley WiT
- Client work focuses on the creation of innovation centers and engines
- Board Director or Advisor to 6 start-ups.
- Founded 5 successfully exited tech companies.
- Private equity professional at The Carlyle Group and management consultant at Booz Allen & Hamilton.
- Line/product management at The Mathworks, Mentor Graphics.
- Ph.D. U. Cal Berkeley, MBA. Harvard, B.Tech IIT

Thanos Yamas

Managing Director, IoTask.

- Serial entrepreneur and innovation expert with 19 years of professional experience in areas like digital networks, learning technologies, mobile apps, predictive analytics
- Founder, investor and board member at public & private EU technology firms.
- Coordinated over 50 complex technology projects for governments worldwide.
- M.Sc , Univ. of Sussex, B.Sc. Athens Univ.

The case of digital land administration systems:

The Zilla project



THE CHALLENGE

The majority of the world land records are poorly managed, land attributes are poorly documented, and governments at the national or federal levels are inadequately resourced to undertake long-overdue land registry (i.e. cadastral) updates

- World = 123 billion acres in size - 37 billion acres = land.
- 4 acres available for every man, woman and child in the predicted 2050 world population of nine billion
- Unfair distribution and lack of access to land are key explanations for poverty and hunger
- 21 percent of the world's private land is owned by a very short list of 15 landowners

Latest developments

- Interactive Community Mapping (ICM)
- Conventional, commercial initiatives on a proprietary/consulting model (ESRI, Thomson Reuters)
- Open source platforms and toolkits (SOLA, STDM, MAST, CADASTA)
- Blockchain-based projects such as those undertaken, with varying degrees of success, in Honduras (Factom), Ghana (Bitland and BenBen), The Republic of Georgia (Bitfury), and Sweden (Chromaway)



The ZILLA approach

Zilla converts transaction-deficient and opportunity-poor environments into transaction-abundant and opportunity rich environments by operationalizing three paradigmatic shifts:

- **From land “ownership” to the definition of context-sensitive land-based rights**
- **From a two-dimensional land “record” to multi-layered land-based attributes**
- **From centralized land “registry” to distributed ledger of land-based**



ZILLA

Enabling Ecosystems of Opportunity Around Land

Building land-management systems involves **three paradigmatic shifts**:

- ❑ **From land ownership**, with a focus on maximizing asset appreciation, **to land stewardship**, with a focus on maximizing asset yield
- ❑ **From two-dimensional, paper, land records to multi-dimensional, digital, land profiles** representing multiple, socially-relevant attributes of a place
- ❑ **From centralized land registries authenticated by a government to distributed ledger authenticated by a community of users**

The creation of land data becomes a collaborative, community effort



The Case of Peru

CURRENT STATUS: Data on land and water assets are disaggregated and of variable quality across geographies

2017 floods of 2017 brought to the fore the country's vulnerabilities to disaster from the improper management of water resources in all regions (coast, highlands and jungle)

Zilla team is working on:

- Field data retrieval and collection for all watersheds along the Peruvian coast (e.g. Tumbes, Piura, Rimac, Ica)
- Development of a design of a network for sensor to develop a combined (field + mathematical modeling) for flooded vulnerable cities
- Development of thematic maps (e.g. flooded area, infrastructure damages, etc) that could provide statistical component and analysis to stakeholders



The KSA case

- S1 - Existing land administration policies
- S2: Strategy for allocation of land for government use
- S3: Strategy for procedures for Property Determination / Adjudication (Survey, Layout, etc.)
- S4: Conceptual Architecture of an integrated cadastral System with use-case scenarios and proof of concepts
- S5: Business and Sustainability model







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Thank you