



National Academies of Science's GUIRR Workshop. July 29-31, 2013. Washington D.C.  
Culture Matters: An Approach to International Research Agreements



Open Innovation Platform for Sustainable Cities-  
A paradigm shift in international collaboration

Dr. Osman Ahmed, Ph.D., P.E.  
Senior Director  
Siemens Industry, Inc.,  
[Osman.ahmed@siemens.com](mailto:Osman.ahmed@siemens.com)

[usa.siemens.com/infrastructure-cities](http://usa.siemens.com/infrastructure-cities)

## Topics:

**Sustainable Built-Environment**

**Open Innovation Platform**

**A Case Study: Masdar- Siemens partnership**

**Cultural issues- a general observation**



## A Sustainable City

### Philosophy

Understand what nature provides you  
Do not consume more than what you need  
Learn from nature  
Strike a balance between nature and human  
Harmonize relationship with nature

### Reality

Effective life-cycle cost  
Life- experience  
Live and learn  
Affordable  
Intelligent  
Efficient

Recycle  
resources

Sustainable  
escapes

Sustainable  
materials

Environment  
knows &  
connects to  
people

Sustainable  
design

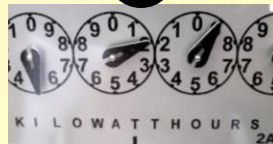
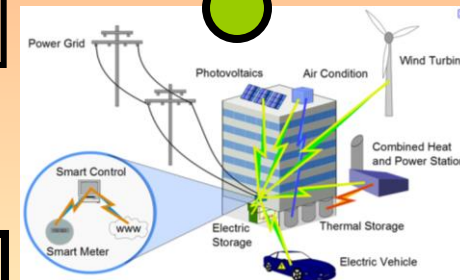
Intelligent  
control

Renewable  
energy  
sources

Smart  
Integrated  
Comfort  
environment

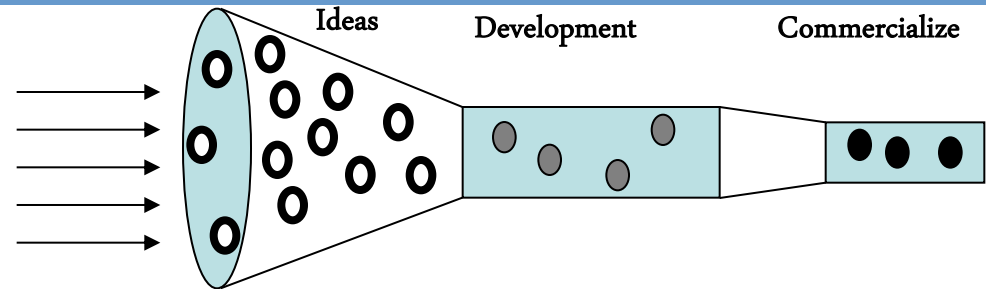
Energy &  
Operational  
efficiency

Photo-chromatic glass  
with smart facade



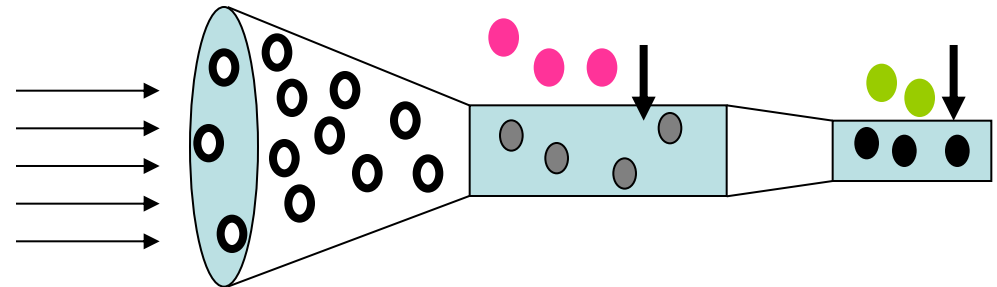
## •Closed Innovation

- External inputs
- Internal ideas
- Internal development of technologies
- Requires large internal R&D
- Successful in 80s and 90s



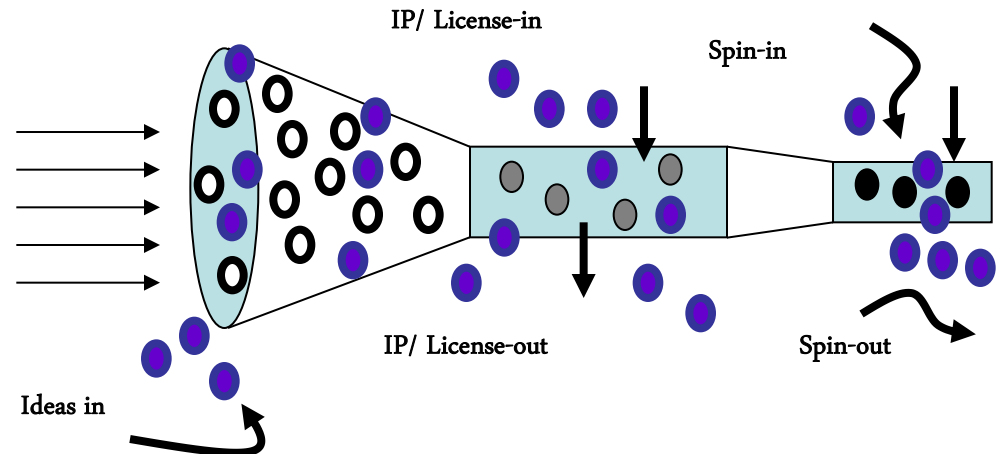
## •Open collaboration

- External inputs
- Internal ideas
- External technologies or products
- Internal adaptation
- Successful in 90s and 00s



## •Open Innovation- Connect & Develop

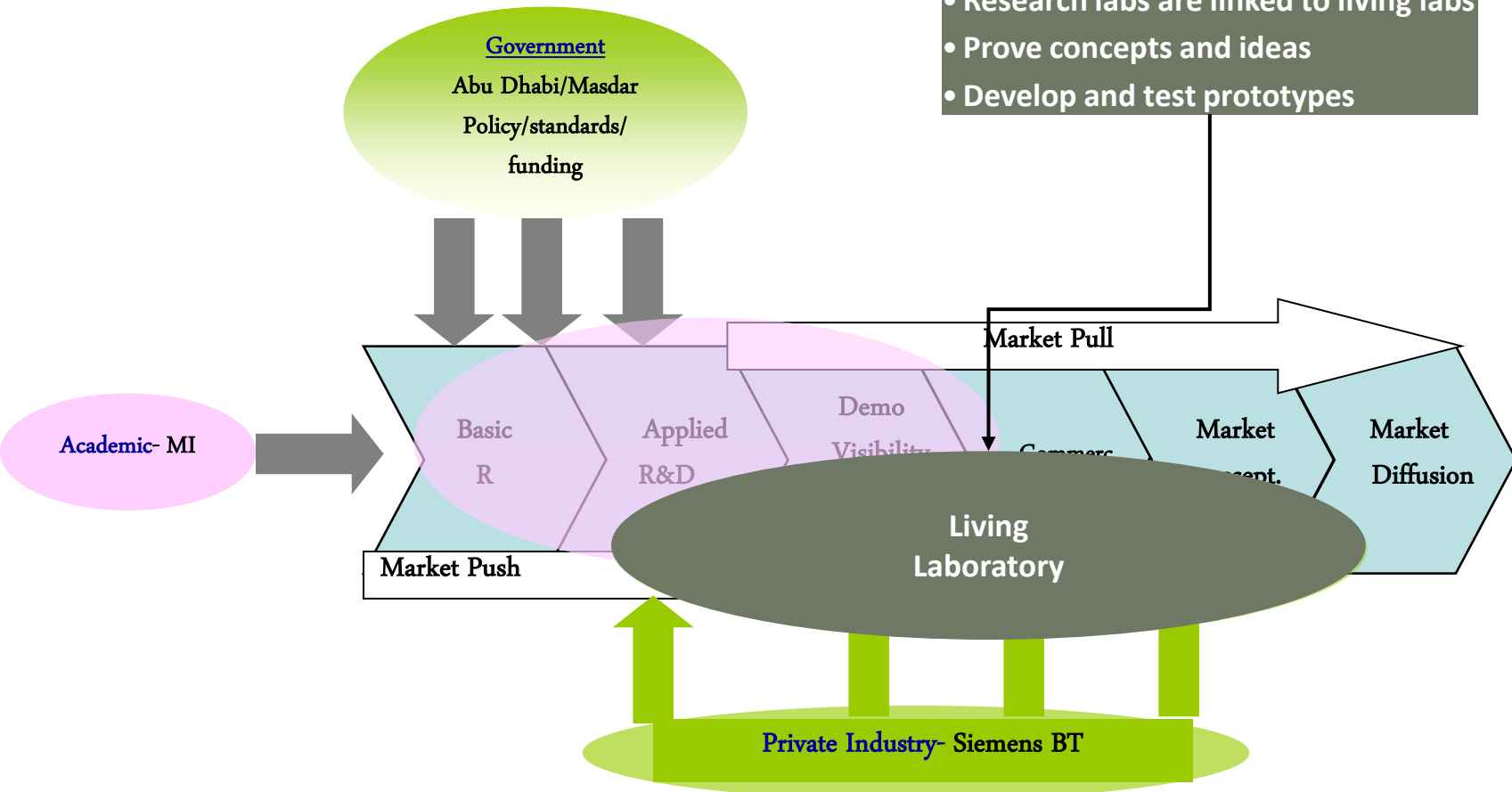
- Innovation acceleration
- Collaborative funding
- Greater pool of external invention
- New revenue stream- license, spin-off
- Successful in 00s and 10s



# Open Innovation Network<sup>5</sup>- PPP Collaboration Model

## Benefits:

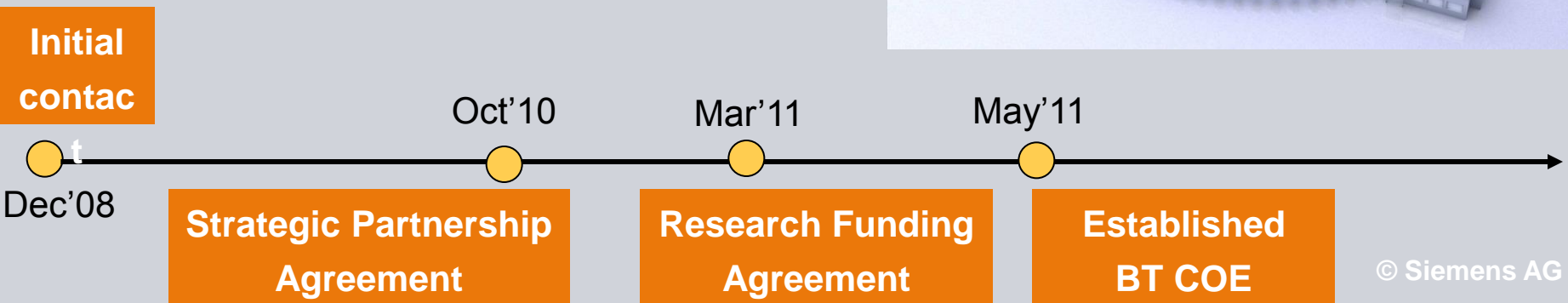
- Increase innovation capacity
- Accelerate Innovation
- Leverage on Govt. funding
- Create Market pull
- Specially suited to sustainable built- environment



## Strategic Partnership focus: Smart Grid/ Smart Buildings

### Siemens AG and Masdar Agrees to:

- Establish a long term strategic partnership
- Implement an innovative power grid combined with advanced building technologies
- Create a Living R&D Platform
- Establish a Centre of Excellence in Building Technologies



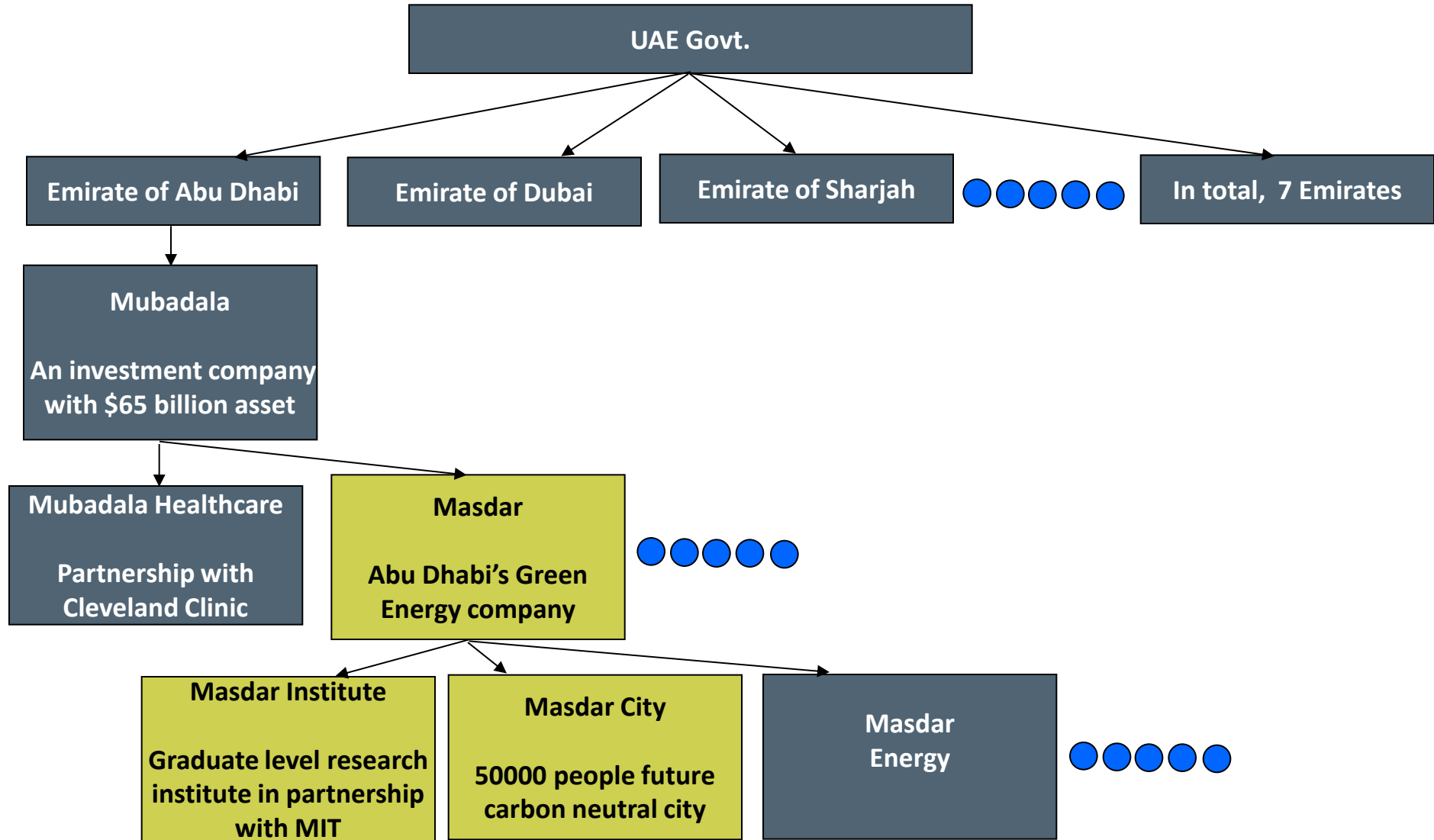


## Project Location: Masdar City, Abu Dhabi, UAE.

- Next to Abu Dhabi Airport
- About 70 miles from Dubai



# Masdar Corporate Hierarchy





CCS\*= Carbon Capture & Storage

Siemens AG

Focus:

- Strategic Partnership
- Research Funding

Masdar Corporate

Focus:

- Strategic Partnership
- Investment

Medium Voltage Network

Focus:

- Commercial offerings
- Partnership

Smart Grid

Focus:

- Commercial offerings
- Research Funding

Energy: CCS

Focus:

- Research Funding
- Partnership

Siemens- Masdar



Strategic Partnership

Masdar City

Focus:

- Infrastructure
- Open Innovation Platform
- Investment

Masdar Institute

Focus:

- Research
- Commercialization
- Funding

Building Technologies Division (BT):

Focus:

- Open innovation platform.
- Living Laboratory
- Collaborative research investment
- Commercialization of research results
- Research Funding
- Commercial offerings

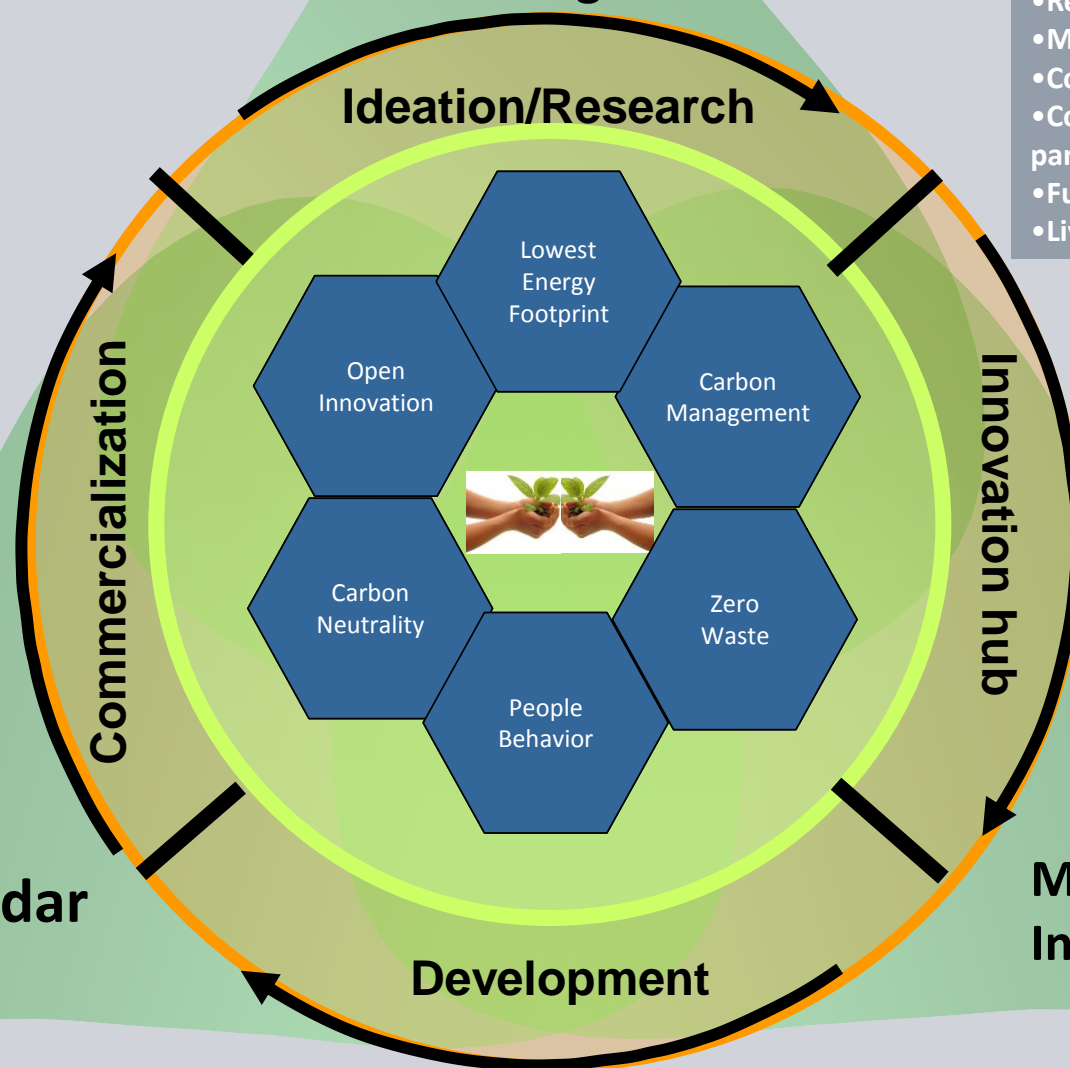
**Masdar- Siemens  
Building Technologies  
Collaboration model**

**SIEMENS**

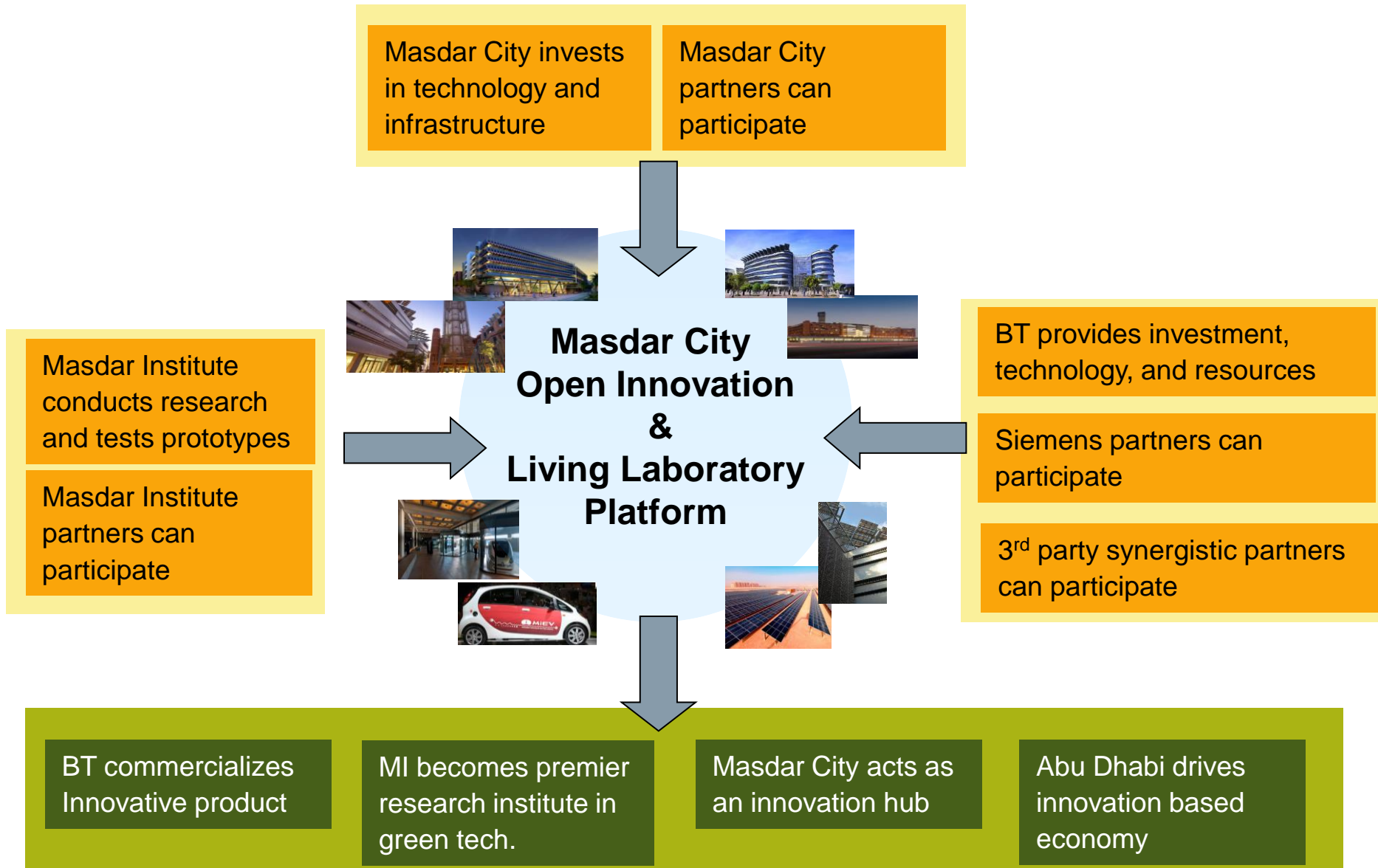
**Siemens  
Building  
Technologies**

**Open Innovation  
Platform**

- Real and live experimental platform
- Migration from research to living laboratory
- Coupled with BT's commercialization process
- Collaboration with external synergistic partners
- Full transparency
- Live , learn and share



# Siemens BT- Masdar Collaborative Investment Model:



**Legacy Culture:****•Mostly challenges are noted for an Open Innovation Platform****Technology Partner**

- Technology Excellence
- In-house R&D mindset
- Organizational acceptance
- Leadership continuity
- Commercial value
- Individual BU goals
- Proper investment
- Risk averse
- Cost sensitive
- IP Rights belong to funding agency

**Government Partner**

- Consumer/commercial excellence
- ROI driven
- Hierarchical organization
- Lack of innovation experience
- Risk averse
- Shot-term focus
- Proper resources

**Research Partner**

- Research excellence
- Funding driven
- Mis-match between expertise and research focus
- Not exposed to commercial constraints
- Proper student resources
- Project discipline
- IP rights belong to the researcher



### Collaborative Innovation Culture:

#### •Requirements:

Government  
Partner

- Common Vision and Goals
- Leadership commitment and continuity
  - Project execution
  - Resources
  - Long-term focus
- Value of Innovation Excellence
  - Building relationship
- Creativity and open environment
  - Transparency and consensus

Technology  
Partner

Research  
Partner



**Thank You!**

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