



EU – India Cooperation Platform in Future Internet & Electronic Media project

(shortname: FI-MEDIA)

Call Reference: EuropeAid/135-474/DD/ACT/IN

Project funded by the Delegation of the European Commission to India

NEM 20TH GENERAL ASSEMBLY, 15 OCTOBER 2015



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Industry Support



Federation of Indian Chambers of Commerce and Industry





Background of call and project type

Europe Aid/135-474/DD/ACT/IN: *EU-India Research and Innovation Partnership*

Restricted call for EU – India industry collaborations in the following 6 lots:

- (i) Environment
- (ii) Biotechnology
- (iii) Transport
- (iv) Energy
- (v) Health
- (vi) **Information and Communication Technologies**



EU-INDIA FI-MEDIA

Indicative allocation of funds by lot: EUR 333 333.

Project duration: 48 months



Objectives

1. **Scoping and selecting topics** out of Future Internet and Electronic Media (FI-MEDIA) for **Clustering between EU and India**;
2. **Facilitating** the formation of R & I Clusters comprising of the Research & Industry/entrepreneur communities;
3. **Establishing Cluster to Cluster (C2C) partnerships** in selected FI – Media topics;
4. **Mobility** of the Clusters for deeper mutual appreciation and improving sustainability of partnership.
5. **Visibility, exploitation, and sustainability.**

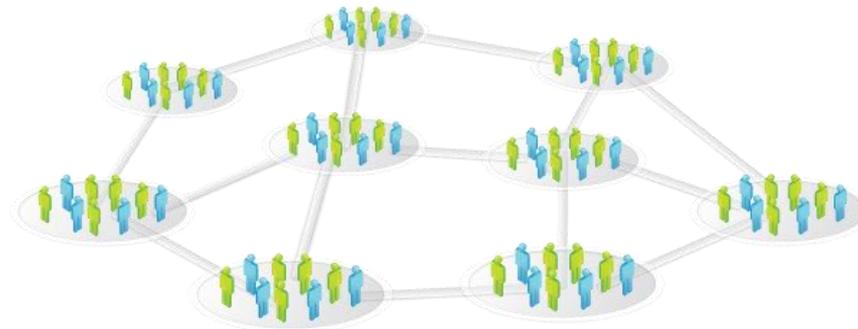


What is a cluster-to-cluster partnership?

Cluster = A closed group of Research & Industry Elements who have agreed to work closely on a selected FI-Media topic



C2C Partnership = Partnership of clusters from India with similar Cluster from Europe held together by working on the same FI-Media topic for cooperation





Our approach:

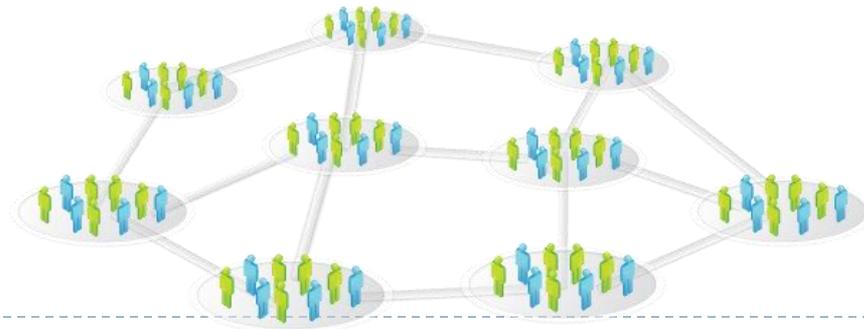
Identify hot FI-MEDIA topics for clustering



Mapping India-EU landscape



Form cluster to cluster partnerships





Activities Planned

1. **Setting up of Coordination platform**, including web portal, advisory board in order to scope of topics and agree on priority topics of FI-MEDIA for clustering;
2. **Individual cluster development** in EU and India clusters in priority topics;
3. **Design and implement travel mobility system** for the clusters engaged in the topics interested in developing partnerships in EU-India;
4. **EU – India C2C partnership engagements** in the selected priority topic;
5. **Report of success stories** of EU-India C2C partnerships formed each year;
6. **Regular dissemination** for visibility and sustainability.

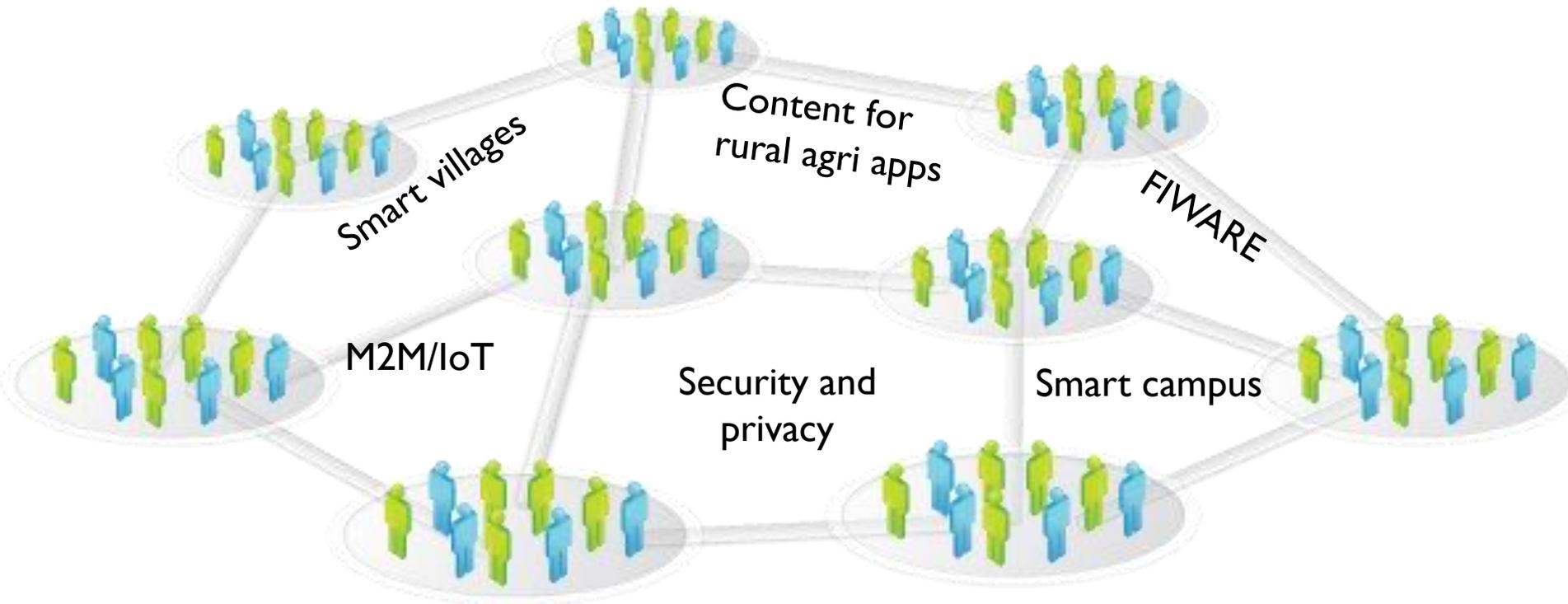


Key Result Area

1. **Clusters are established** at EU and India around the **selected** FI-MEDIA topics;
2. **Mobility programme** contributes effectively to the building of the C2C partnerships;
3. C2C Partnerships **grows** with time and attain **self-sustainability**;
4. **Greater** involvement & **participation** of Indian Research & Industry elements **into NEM** and its globalisation activities.



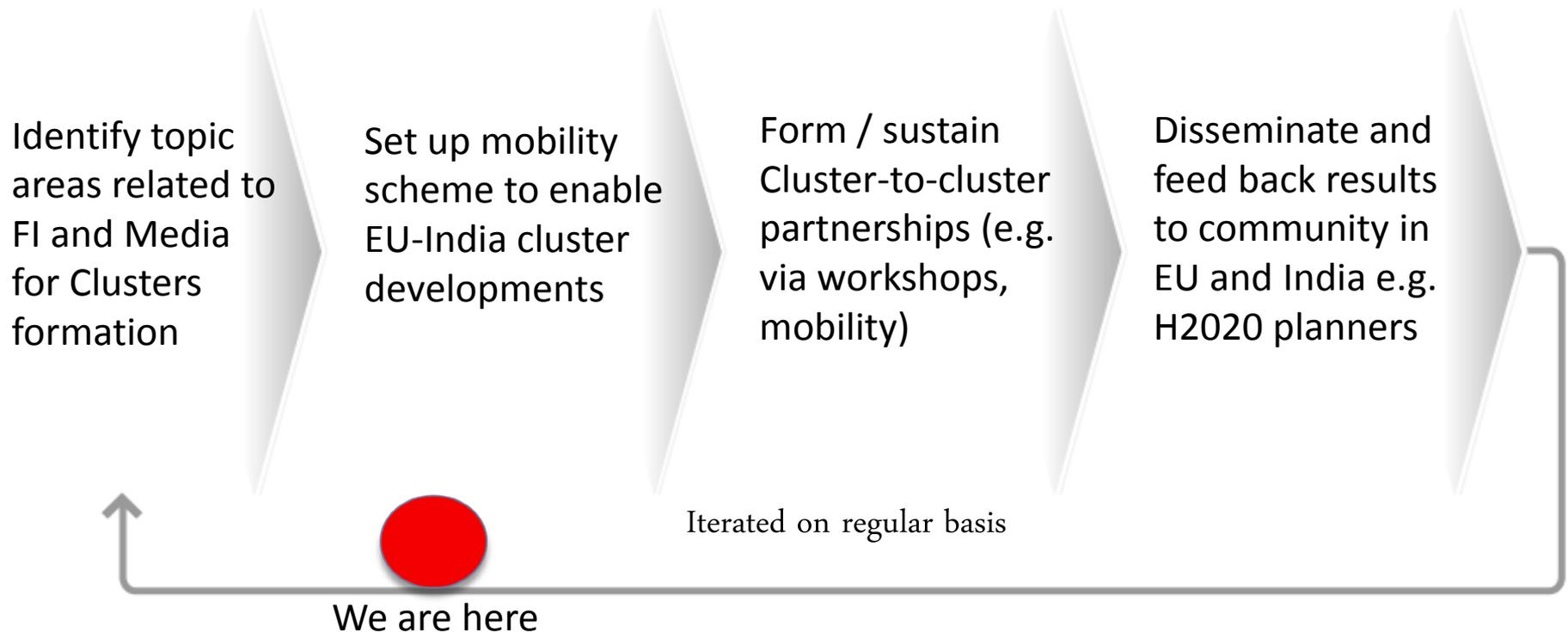
Main topic areas scoped between India and EU in year 1



If you are from Industry or Research and fit anywhere here, please talk to us!!

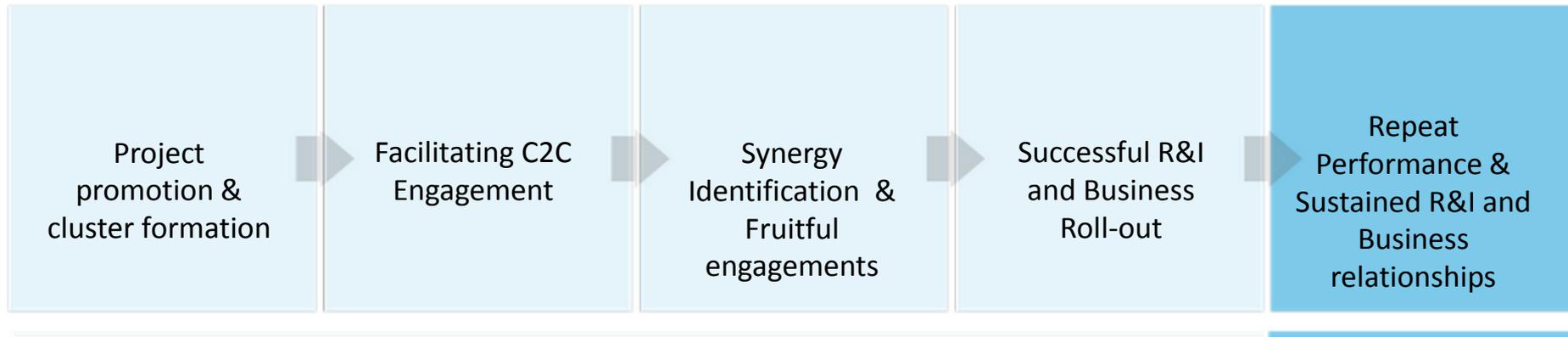


Activity Cycle





Roadmap: Successful & Sustainable R&I and Business Engagement





Immediate Opportunities For Clustering between EU and India



Smart Campus Initiative @IITD

Background

Smart campus:

inspired from idea of 'smart cities'

Academic campuses:

Knowledge creation, dissemination and guiding societies for better living.

Pillars for Smart Campus:

infrastructure, operations and people.

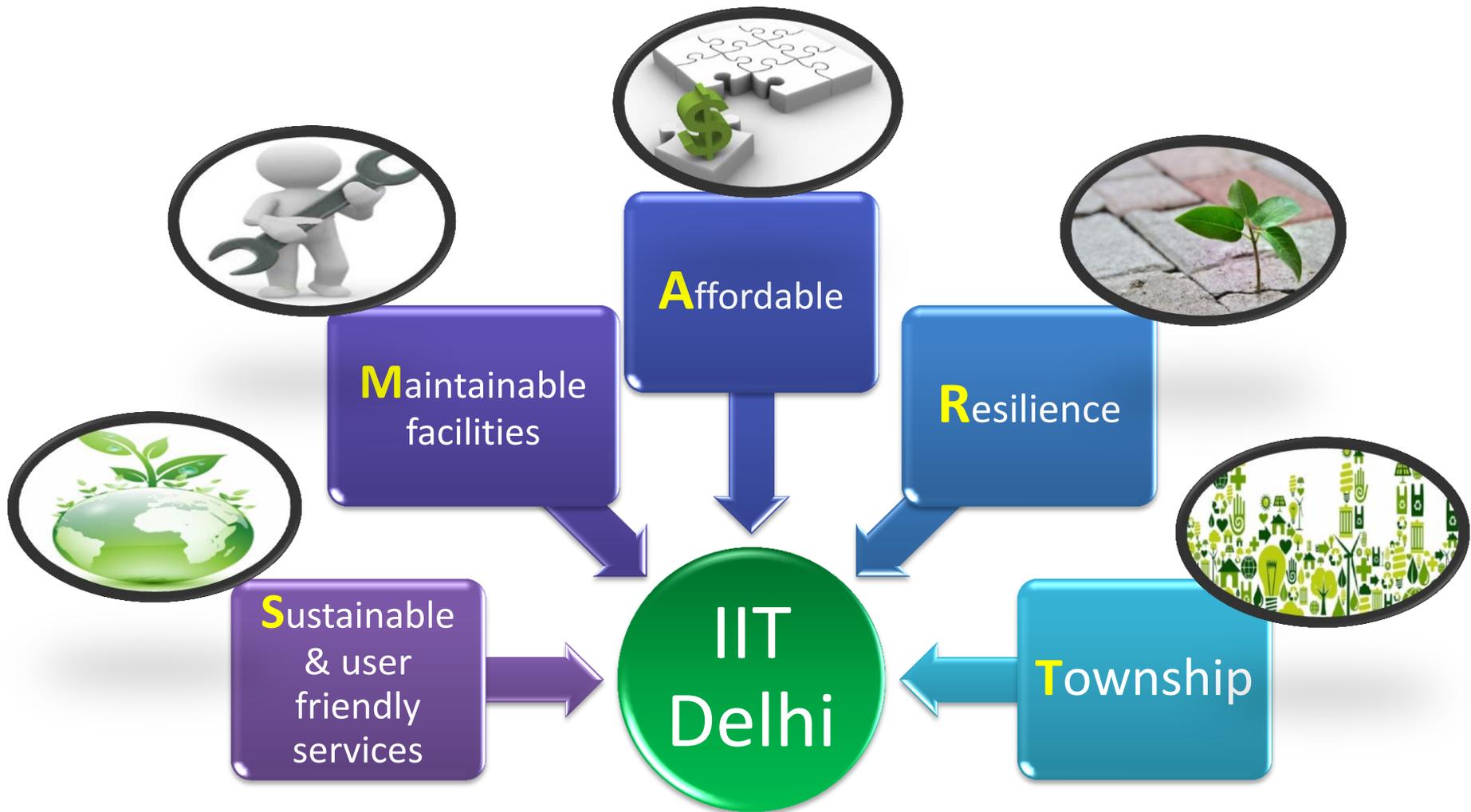
Integration

among pillars infused with intelligence to utilise resources efficiently

Key focus areas:

Energy efficiency, Connected Services, Foster innovation and adopt best practices.

SMART?



Idea of a Smart Campus



SMART TECHNOLOGY ENABLED INTEGRATION AND GOVERNANCE

Digital forms Paperless office Planning data Single sign-on Personalization Information availability Learning services

Time scheduling Process improvement Facilities allocation Digital lectures & videos Analytics Classroom technology E-News and updates

Transactions Automations Smart Cards System integration Self service Dashboards

ADMINISTRATION STUDENTS FACULTY

Ecosystem fostering Innovation & Creativity within IIT Delhi Community

How EU can cluster with us



List of services in a smart campus



Select those which are sustainable or enhance sustainability



Involve students to foster entrepreneurship



Research opportunities



Crowd Sourcing generated ideas

Campus Life

Improvement: Security, noise and air pollution control, maintenance of infrastructure, making it disabled friendly.

Water and Power Audit

of the Campus;
Identify potential areas where savings can be made

Underground and Over-ground map

for the traceability of locations

Move towards **a paperless, transparent office.**

Waste Management in general and waste water management in particular for hygiene and sustainability.

Issue of toilets and drinking water

(engage professional firm)

Move towards Crowdsourcing for Idea Generation & Need Estimation

Crowd-sourcing for Idea Generation

A portal for soliciting feedback was introduced during 17th Aug- 6th Sep 2015.

Smart Services

- Campus Smart Card options
- Academic Services
- Internal Services like networking, IRIS, CEP, Maintenance, etc
- Access to facilities / External services

Sustainability

- Classrooms & laboratories
- Infrastructure & Physical Assets
- Water resource management
- Electricity management
- Waste management
- Green initiatives

Research Opportunities

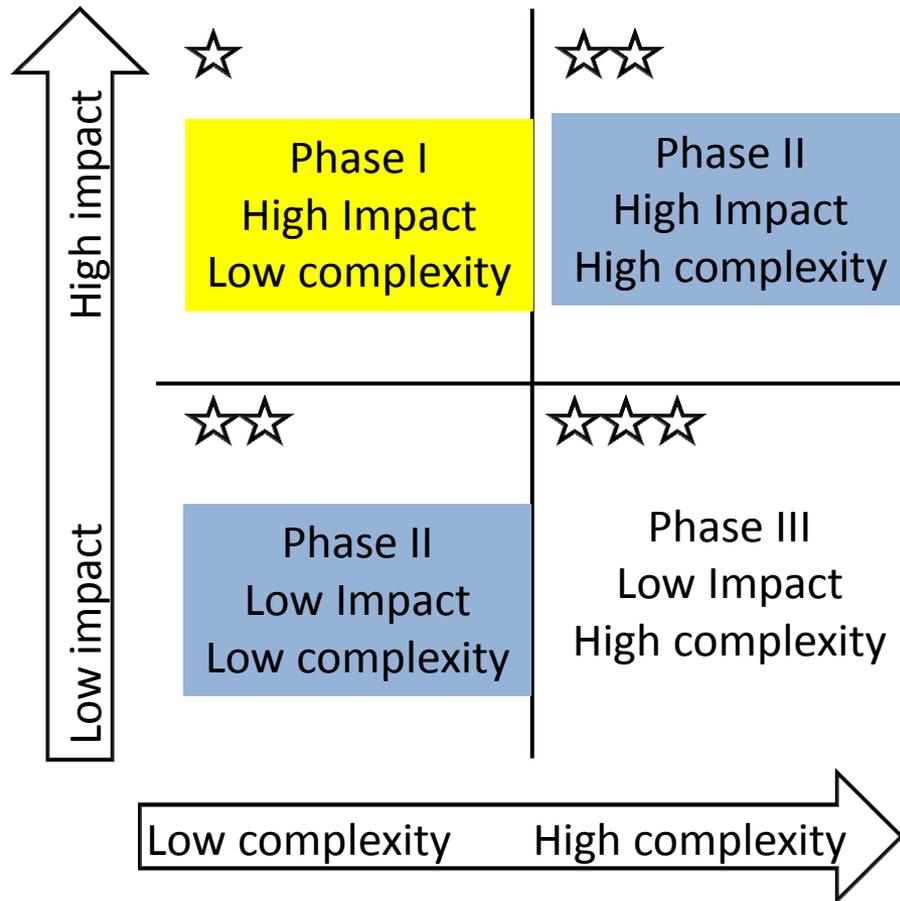
- Student projects
- Best practices documentation
- Learning and productivity
- Scalability
- Replicability
- Documentation
- Funded projects

Business Opportunities.

- Entrepreneurship
- Funded ventures
- Event design
- Any others

Identification of Potential Champions

Impact Vs Complexity (vs Importance)



Phase 1: Smart campus initiatives

(High impact and low complexity)

Smart cards for all students and employees

- Card based/Biometric attendance system for students
- Access to services (library, lab, hospital, printing, etc)
- Cycle dock (Bicycle sharing system)

Facilities & infrastructure

- Smart security (CCTVs for Video Surveillance, etc)
- Sensor based doors for entry in Departments & Labs
- Bus tracking using GPS
- Smart speed sensors across campus
- Video conferencing facility in all departments
- Motion sensing lights and fans

Access to information services / kiosks

- Searchable maps with GPS
- Availability of information kiosks in key locations
- Digital display panels at key locations
- Smart navigable notice boards
- Bulk SMS for common messaging / alerts
- Mobile portability for complete IITD website
- Smart interactive features using Web 2.0 in all website

Sustainability

- Smart management of electricity
- Smart management of water
- Smart maintenance and mechanized cleaning
- Sensor based waste management (degradable vs non-degradable waste)

Phase 2: Smart campus initiatives

(Low impact & low complexity suggestions)

Smart Cards

- Add-on smart cards for family members
- Smart cards for contract employees

Facilities & Infrastructure

- Smart lecture kits for the management of classroom resources
- Transport / travel support
- Bicycle path besides roads

Access to information services / kiosks

- Online booking institute resources (classrooms, halls, guest house, online book recommendation).
- SMS Alert facility for notice/circulars (Title) to user groups
- Searchable key notifications (pdfs) repository and telephone directory

Sustainability

- Green / Non-green garbage collection
- Green trucking practices inside the campus
- Noise control mechanisms near road walls

Phase 2: Smart campus initiatives

(High impact & high complexity)

Smart Cards

- Cash free campus and digital wallets
- Integrated health system enabled through campus card (patient / doctors/ pharma)

Access to information services / kiosks

- Integration of information of dept. & central library
- Digitization & integration of past official documents and paperless offices
- Online System for information retrieving / tracking requests & approvals
- Dashboard for employee and students
- Digital map of underground infrastructure

Facilities & Infrastructure

- Smart meter/panels for electricity consumption
- Intelligent water-free bathrooms/toilets.
- Smart parking facilities

Sustainability

- Energy generation from the solid waste management
- Solar water heaters installed in hostels and residences
- Shaded footpaths with solar panels on top
- Regenerative systems across footpaths (generate power)
- Waste water management to prevent direct/indirect communicable diseases

Phase 3: Smart campus initiatives

(Low impact & high complexity)

Smart Cards

- Smart card for mess management and meal billing could be started

Facilities and Infrastructure

- Online management of inventory items may be started under maintenance facility.
- ICT enabled facilities implemented for physically challenged
- Speech technology enabled kiosks

Sustainability

- Bio-gas plant could be developed to generate energy
- Monitor carbon footprint of the campus (U Chicago Waggle project)
- Rainwater harvesting for all buildings on campus.

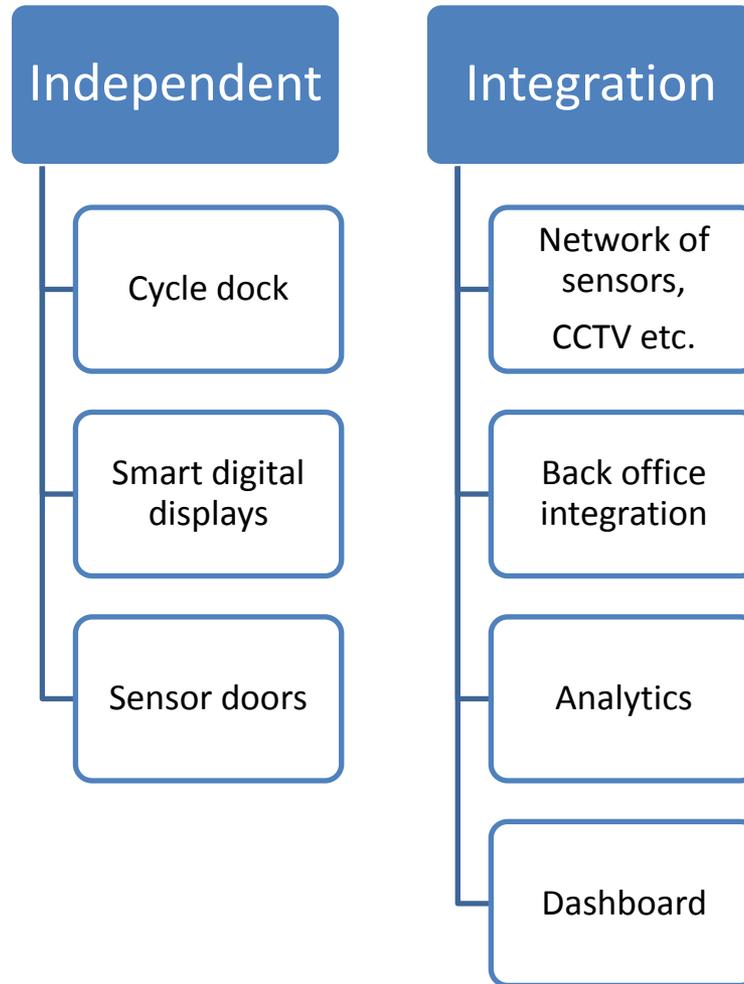


Implementation

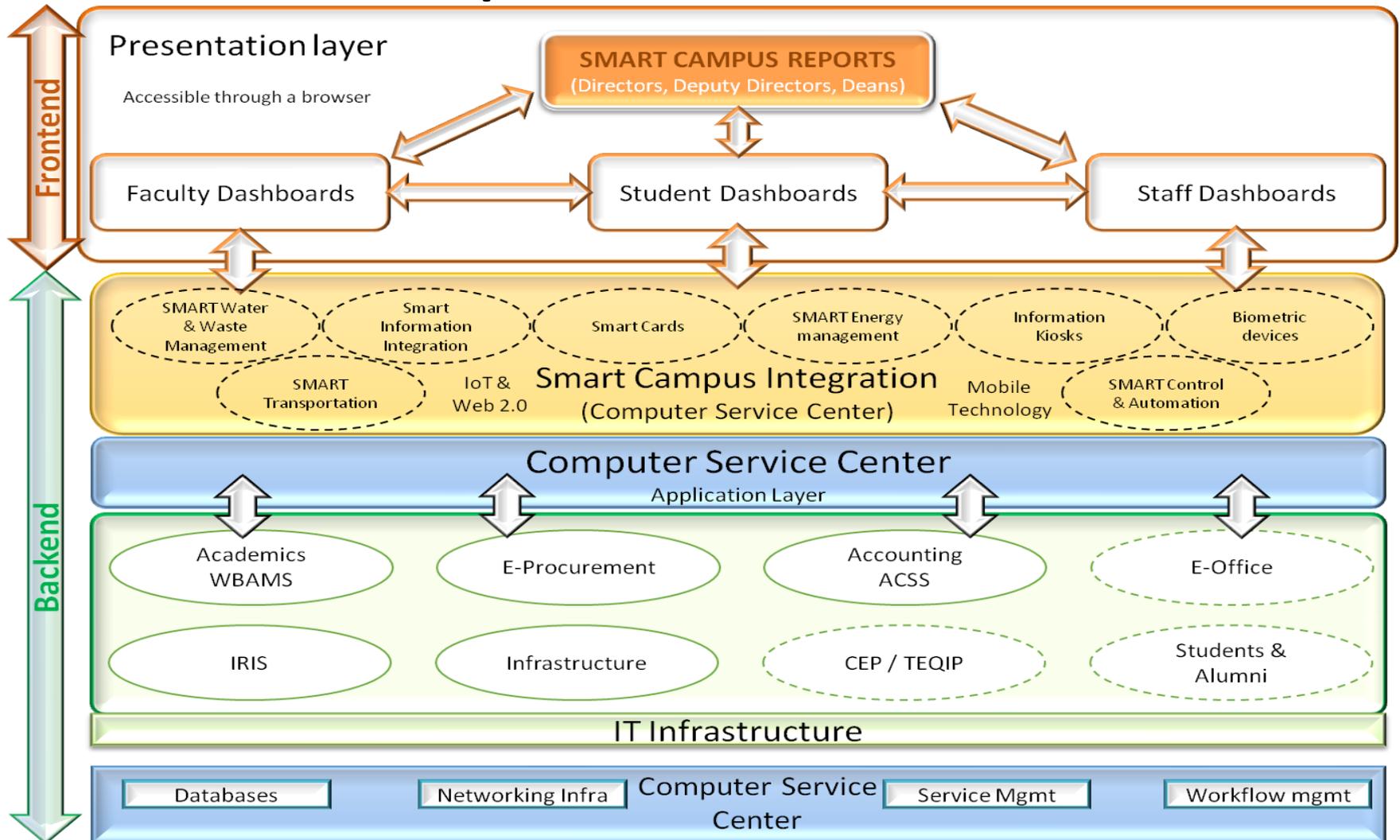


Lecture presentation Dr. AK Kar

Smart Solutions



Smart Campus Architecture @IITD



Next?

Implementation strategy



Way Forward



Clustering partnerships
in PPP mode



Foster research in
variety of areas



Sponsored research
(DEITY, EU H2020,
WAGGLE)



Ecosystem for
collaborations



Foster
entrepreneurship



A reference model
of Smart Campus

You may reach us @



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Thank you