



# Information Communication Technology (ICT)

In

## Health Care In India



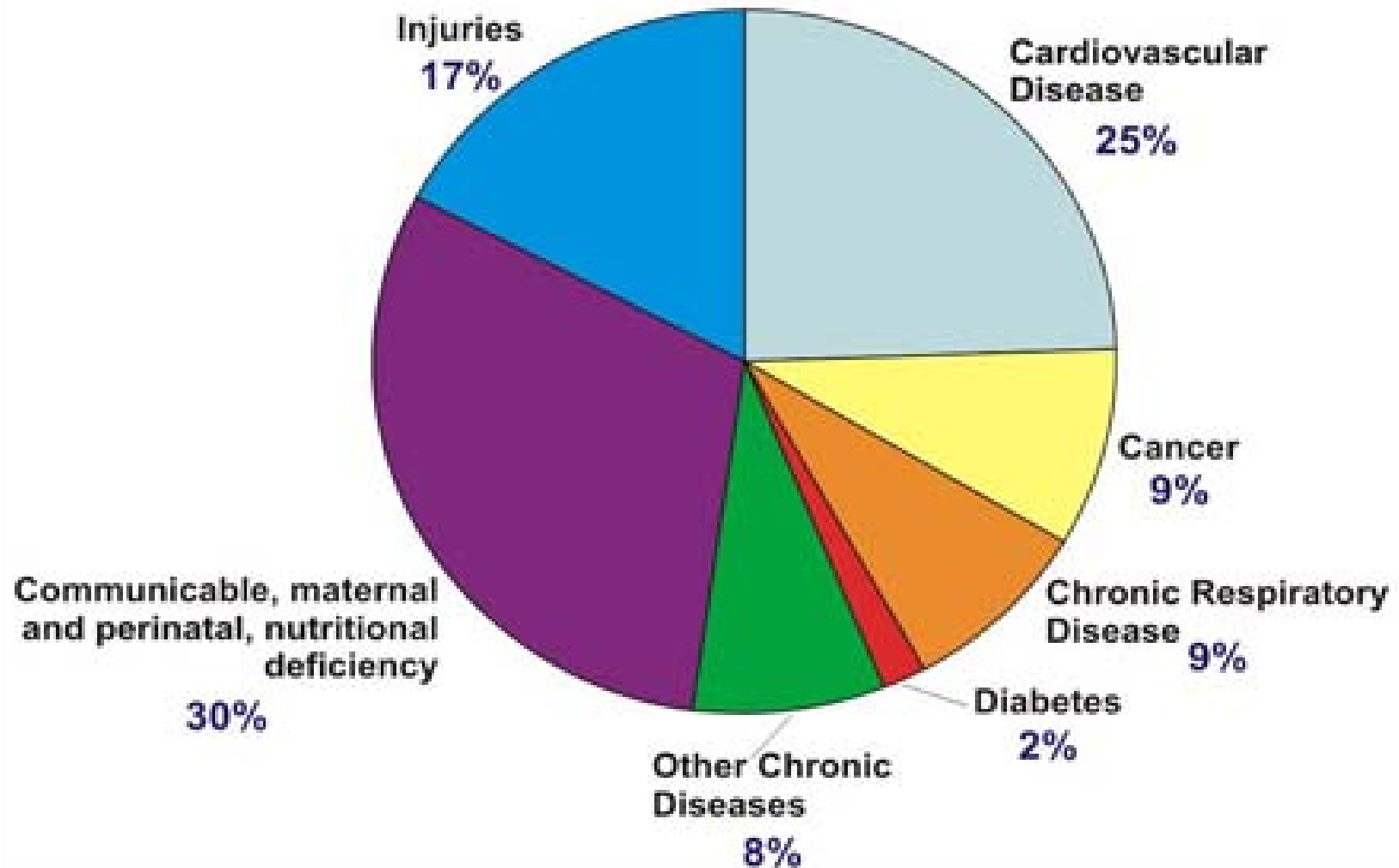
"The health of people is really the foundation upon which all their happiness and all their powers as a state depend."

**Infrastructure Leasing & Financial Services Limited**

# PRESENTATION

- ❑ **Issues in Health care**
- ❑ **Challenges in health Care**
- ❑ **Role of ICT in Health Care**
- ❑ **How does ICT work**
- ❑ **Benefit of ICT**
- ❑ **Some concerns**

### Estimated deaths by cause, 30-59 yrs, India, 2005



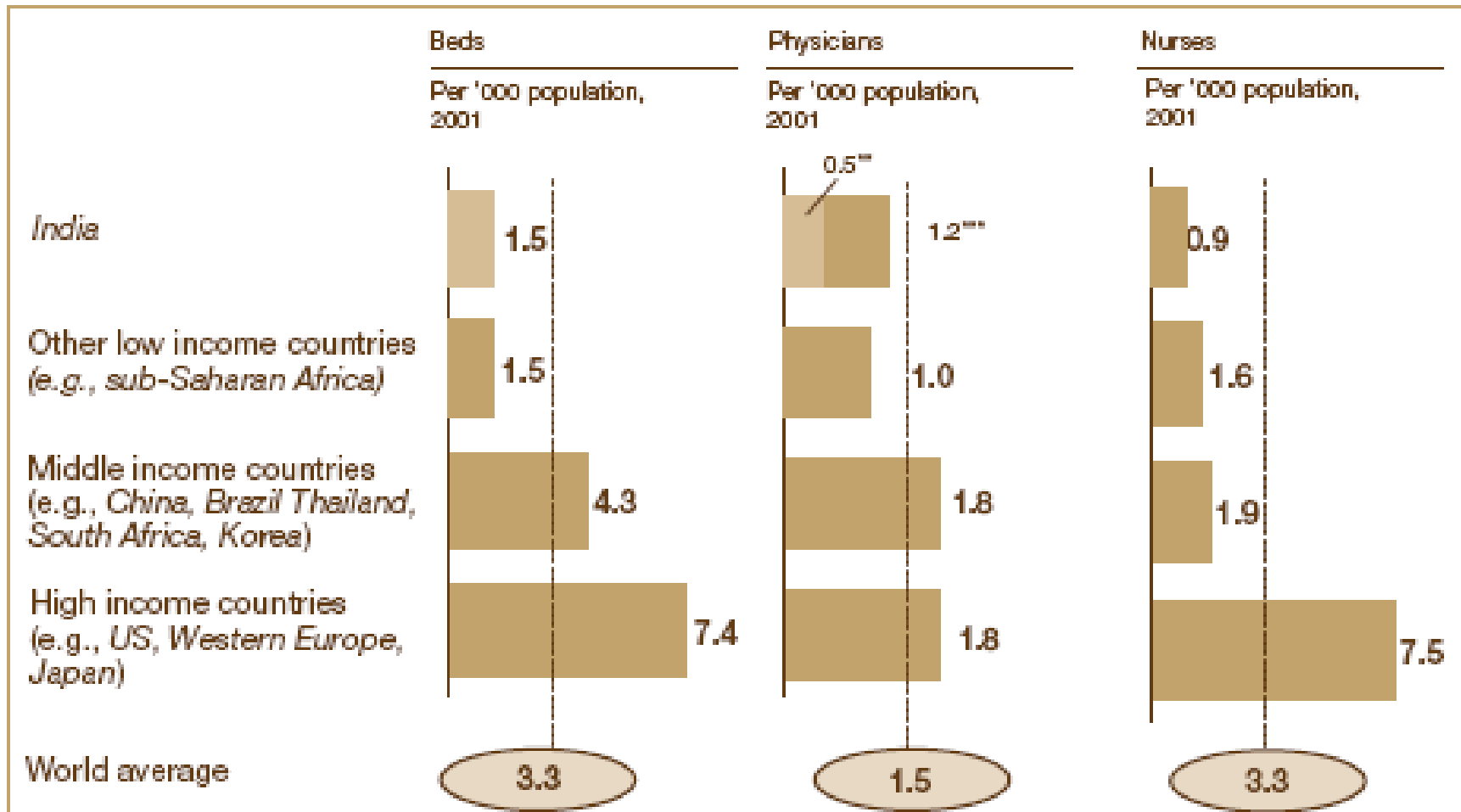


# Health –Emerging issues

- **4.5 million** people in the country are expected to be HIV+,
- Infant mortality rate per 1000 birth is **60**
- **40.9 million** people are expected to having diabetes
- There are an estimated **12 million** Visually challenged people in the country
- Over **90%** of the Visually challenged live in Rural Areas-

Most of the health indicators are a serious cause of concern

## Health Infrastructure in India -Status



# Health Scenario In India-some facets

- 12% of household exp on health
- Bed population ratio 1:1100 (2006) vs. ideal of 1:500
- 2 million beds required as against 0.9 million available
- 9% are covered under health schemes
- 0.9% GDP for health (WHO recommendation 5%)
- 5% of annual family income spent towards curative health care
- Major cause for debts in rural India



# Issues in Health Care

- Lack of adequate Infrastructure
- In equal distribution
- Lack of Insurance –11% population covered
- Health care divide
- Rise in Diseases –malaria ,TB ,dengue,AIDS .lifestyle disease
- Poverty – 27.5% live below poverty line
  - 300 million live on less than a dollar / day
  - 50% children malnourished
- Others – housing , water , sanitation

Digital divide parallels the health divide



# Challenges in Health Care

- Burgeoning population pressure
- Inadequate number of medical doctors and paramedical health workers
- concentration of healthcare facilities in urban centres
- Illiteracy
- unorganized private health service delivery initiatives and
- paucity of government financial resources





# What can ICT do for Health care

- Enhance the outreach
- Provide Support to doctors
- Create Awareness
- Improve efficiency in delivery
- Interface between the doctor and the patient
- Collection of basic data
- Reduce the errors in diagnosis

Technology can make health services 'ubiquitous' and 'on time'.



# IT Solutions in Health care

Use of IT in health care allows the collection, storage, retrieval and transfer of information electronically.

Some of the health IT solutions are :

- Computerized provider order entry (CPOE)
- Electronic Health Records (EHRs)
- Clinical decision support system (CDSS)
- Picture archiving and communication system (PACS)

# Applications of ICT in Health Care

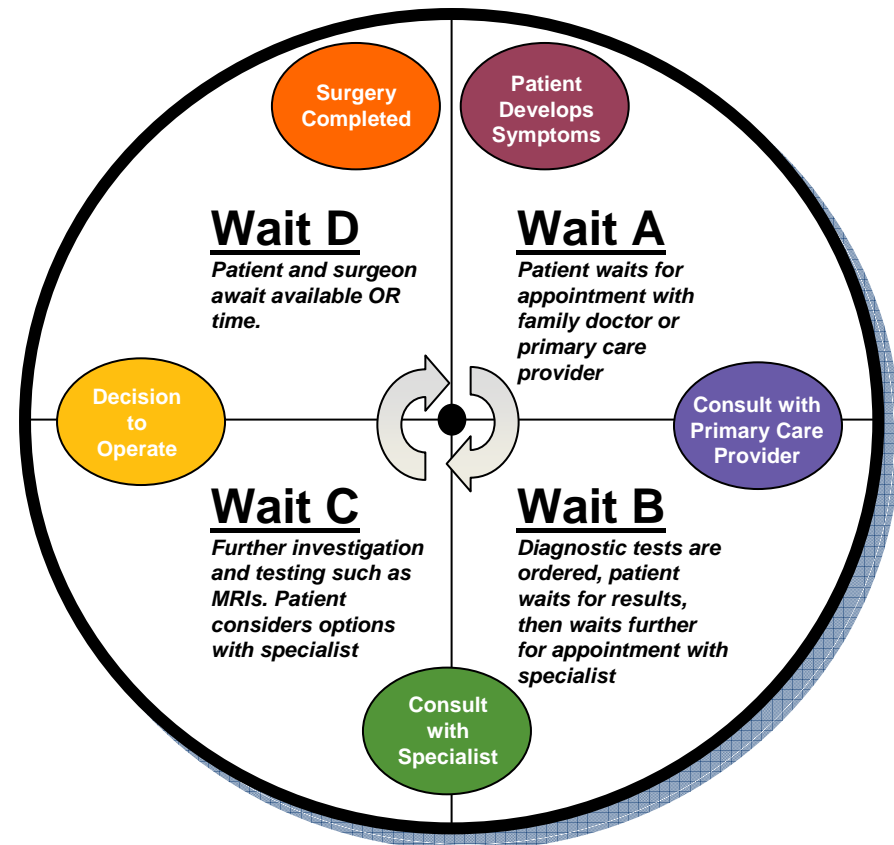
- Electronic patient record
- Teleconsultation
- e- Prescriptions
- Telementoring/Teaching
- Tele – homecare
- Tele-Education



# The Access Challenge

*“Providing Timely Access to Quality Care.....and doing that Efficiently”*

- Patient centered care
- Collaborative approaches
- Redesigned business processes
- Evidence based care pathways
- Relevant data capture and analysis
- **Modern ICT solutions**
- Timely feedback and education
- Innovative funding and compensation approaches



THE WAIT TIME CLOCK

# How Does ICT Support Wait Time Management?

## QUALITY

- Better care coordination through collaborative case management
- Appropriate care based on best evidence
- Prevention of adverse events and public health threats
- More effective care, improving health outcomes

*Improving the quality of care improves health and saves lives, reducing the burden on the system and ensuring the optimal use of available capacity*

## PRODUCTIVITY

- Time savings for clinicians
- Avoidance of unnecessary diagnostics, procedures and visits
- Improved health system management capability

*Improving the productivity of health care saves costs and makes optimal use of available human resources and medical equipment*

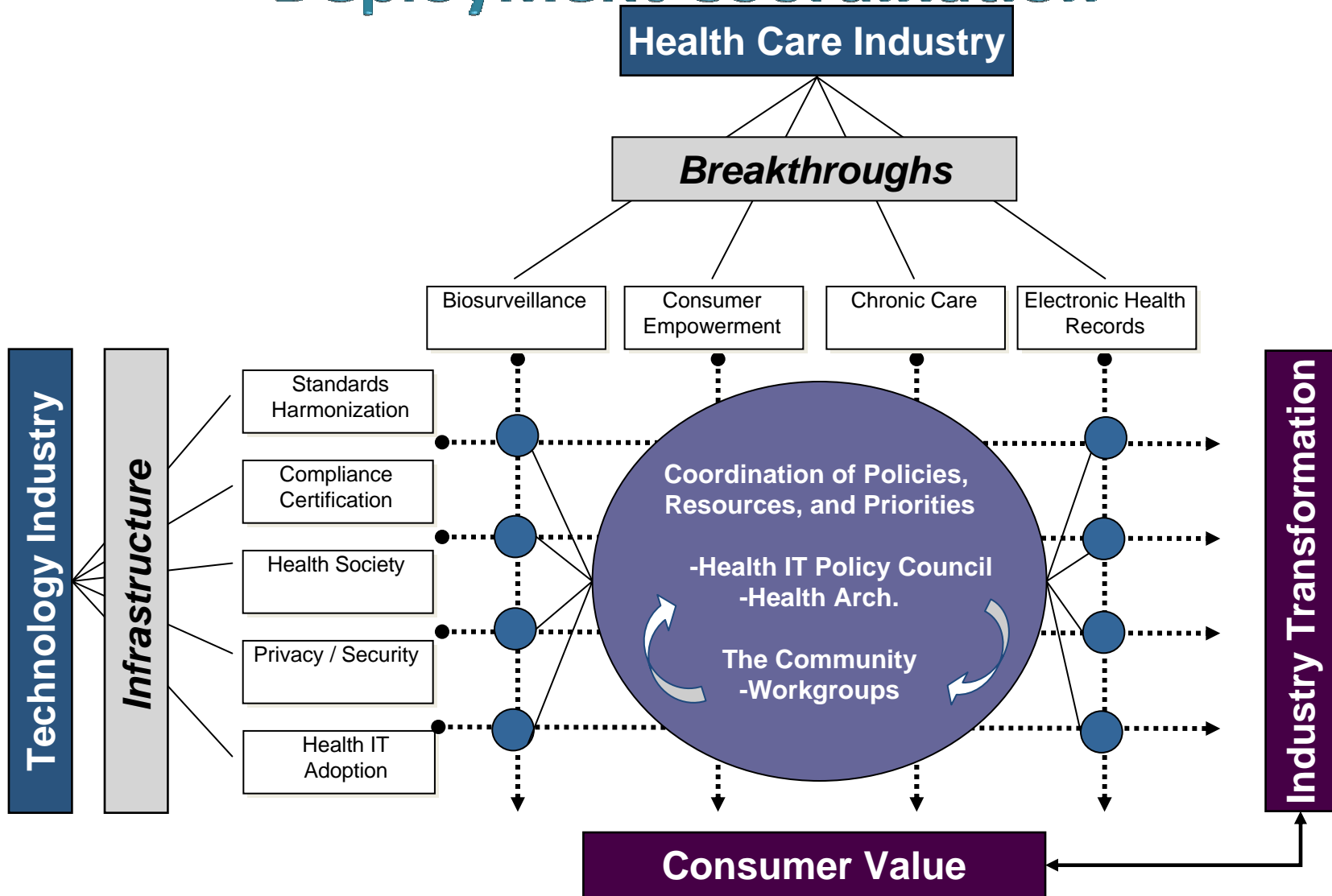
## INCREASING CAPACITY

## ACCESS

- Timely delivery of care
- Increased interpretations by remote specialists
- Increased availability of community based health services
- Reduced Patient travel time and cost to access services
- Increased patient participation in home care
- Increased patient access and use of their health record

**REDUCED WAIT TIMES**

# Health Information Technology Deployment Coordination

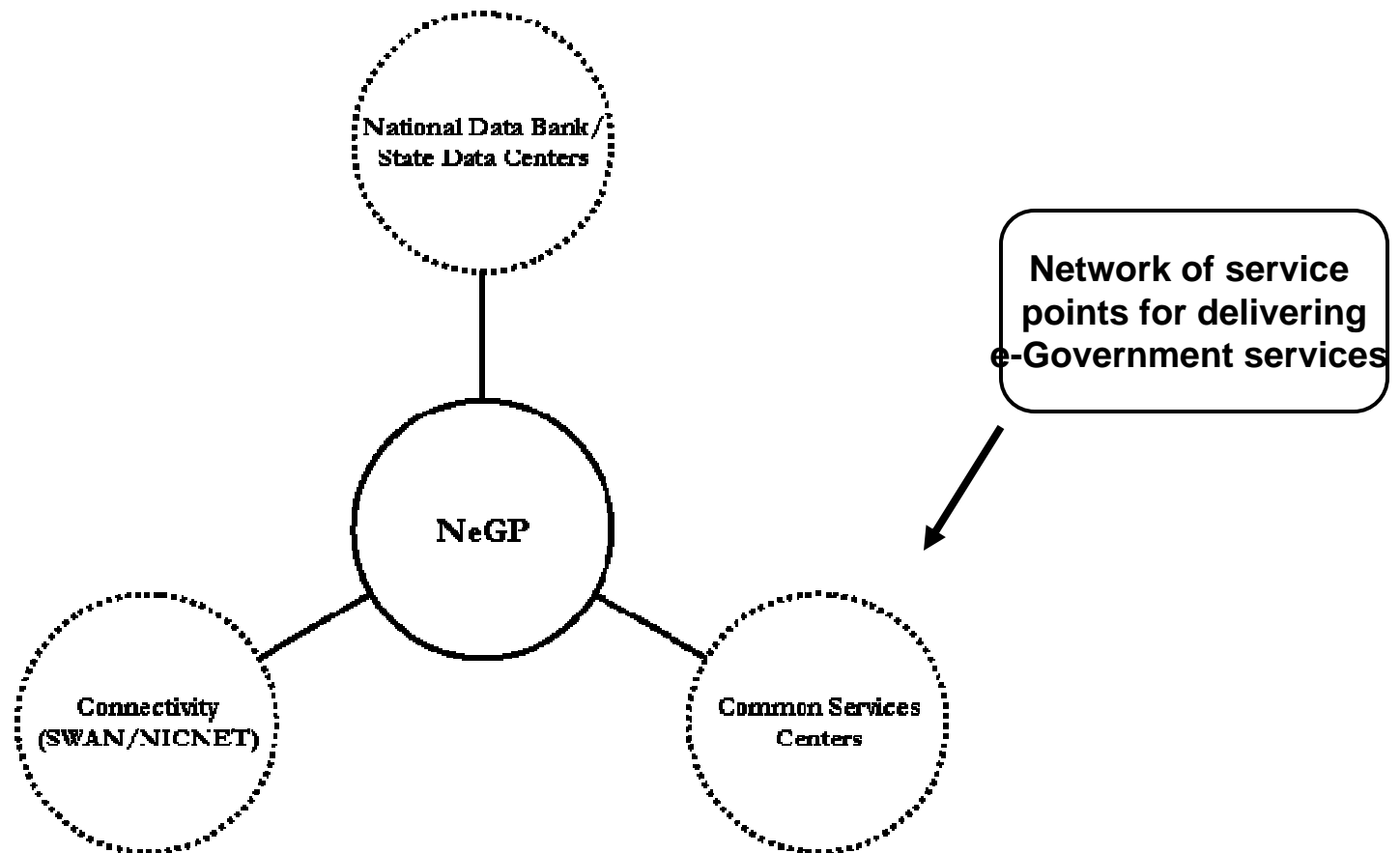




# Advantage of ICT in Health care functions

- Improve health care quality;
- Prevent medical errors;
- Reduce health care costs;
- Increase administrative efficiencies;
- Decrease paperwork
- Expand access to affordable care. Early detection of infectious disease outbreaks around the country;
- Improved tracking of chronic disease management;

# The CSC Scheme

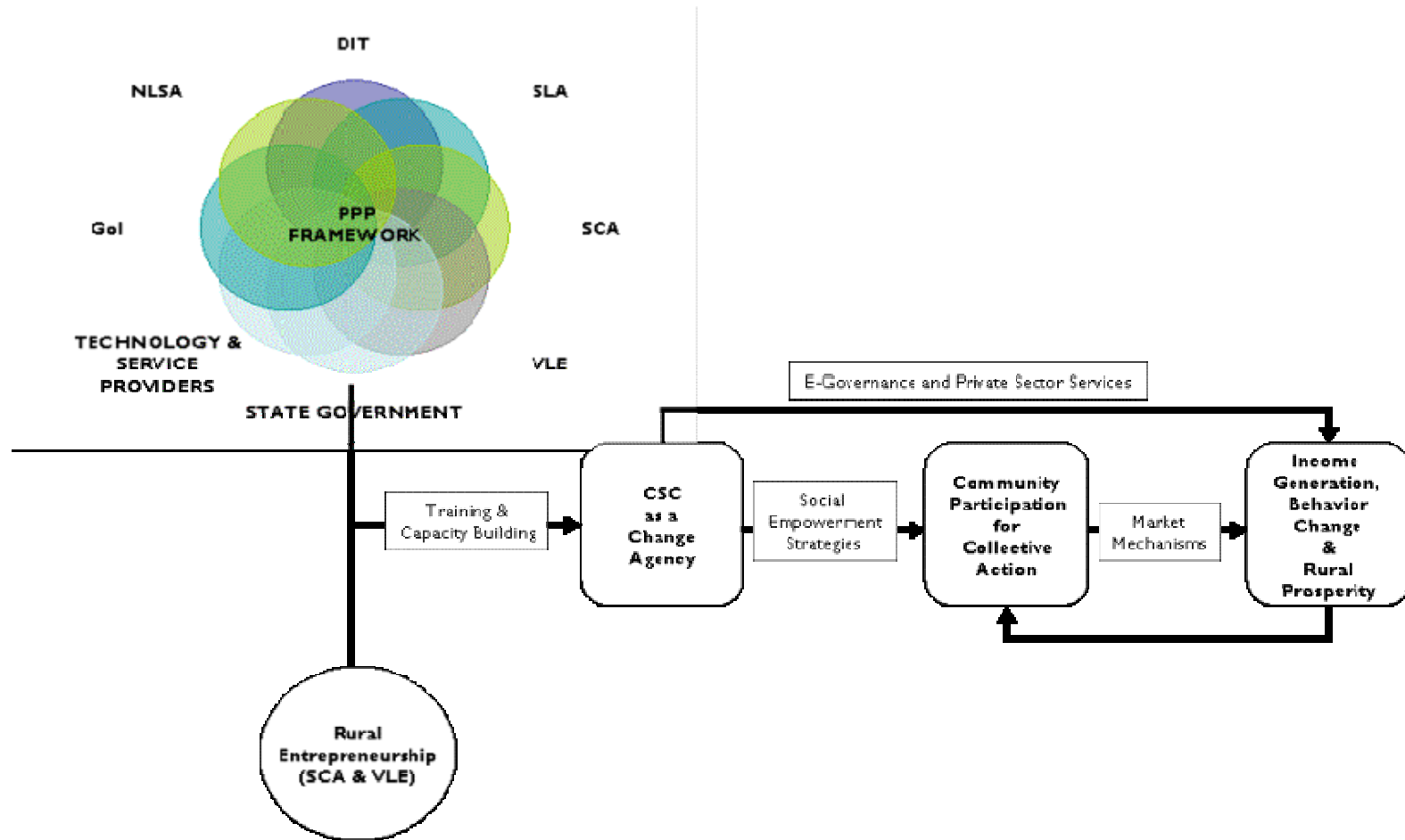


**The 3-Pillar Model of NeGP**

**“Web-enabled Anytime, Anywhere access”  
to information and services across the country**



# The PPP Model for Socio-economic Transformation



# Objective Of Telemedicine

- To encourage & promote application of TM technology in clinical care,
- Fostering, networking & collaboration, among health care providers,
- To train of students, health professional, research fellows &
- To co-ordinate with academic institutions, Medical Council of India,

# Impact Of Telehealth

- The Industrial Revolution
- The Green Revolution
- The White Revolution
- The Biotechnology Revolution
- The ICT Revolution
- -- and now the **ICT in Health Care**



Telemedicine



Teleophthalmology



Telecardiology



# ICT Enabled Health Care-some concerns

- Sensitization among medical fraternity and Health care professionals
- Standards & protocols for inter-compatibility of Digital patient data.
- The need is to evolve a Health care solution delivery and not information
- Cost effective and scalable solutions
- A detail Study of health care solutions possible using ICT such as (Eye care, management of diabetes, identification of heart diseases, etc..
- Legalities governing the delivery of health care solution thru the ICT platform.
- Using the network to empower frontline healthcare providers





# What Next -

- **Redefine the process**
- **Focus on Outcome rather than the process**
- **Buy services rather than products**
- **Ensure connectivity**
- **Innovate**
- **Design for the weakest link**
- **Improve the service delivery**

**Thank You**



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