Unleashing National Growth through Smart & Secured Governance

Concept By:

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Chairman, Global Smart Cities Panel & Micro Tech Global Foundation

Presented at:
Only 0.45% of land area is used for Living space.

Population of 206 countries put together equals India’s population !!!

**Land:** 2,973,190 sq km (2011)

**Water:** 314,070 sq km (2011)

**Coastline:** 7,517 km

- Population: 1,368.46 million
- Area: 3,287,590 Sq. kms. (1,269,346 sq. miles)
- Density: 460 sq. kms.
- Number of Households: 246 million
- Literacy Rate: 74%
- GDP (at current prize): INR. 216.454 lakh cr.
- Annual Per Capita Income: INR. 126.408
- Largest Youth Population: 600 million

Administrative Units (in nos):
- State: 28
- Union Territories: 09
- Districts: 725
- Cities: 68
- Towns: 4,041
- Villages: 640,930

**Water Scenario in India (cubic kms/year):**
- Water use per person per day: **135 litres** (as per IS 1172 Standard);
- Annual fresh water required: **62.6**;
- Total fresh Water received on land surface: **1,150**.

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2025</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>688</td>
<td>910</td>
<td>1072</td>
</tr>
<tr>
<td>Drinking Water</td>
<td>56</td>
<td>73</td>
<td>102</td>
</tr>
<tr>
<td>Industry</td>
<td>12</td>
<td>23</td>
<td>63</td>
</tr>
<tr>
<td>Energy</td>
<td>05</td>
<td>15</td>
<td>130</td>
</tr>
<tr>
<td>Others</td>
<td>82</td>
<td>72</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>813</strong></td>
<td><strong>1093</strong></td>
<td><strong>1447</strong></td>
</tr>
</tbody>
</table>
Critical Infrastructures of India

- Major Power Plants – 710;
- Transmission Companies – 40;
- Distribution Transformers – ≈ 2.5 million;
- Transmission Lines – 4.04 lakh CKM
- Sub-Station – 3.1 lakh;
- T & D loss – 22.77%

Power

- Road Length – 5.60 million km;
- Vehicle Population – 230 million;
- Railway Stations – 7,349;
- Airports – 126;
- Major / Minor Sea ports – 13 / 200.

Transport

- Universities – 911;
- Colleges – 39,050;
- Schools – 1.52 million;
- Total Enrolment – 131.4 million.

Education

- Bank Branches – 151,214;
- ATMs – 227,051.

Communication & Postal

- Mobile Subscriber – 1,166 million;
- Land Line Users – 21.17 million;
- Base Transceiver Stations – 18.34 lakh;
- Teledensity (overall) – 90.11%;
- Internet Users – 627 million;
- Average Revenue Per User – Rs.67.39;
- Post Offices – 154,910.

- Major Govt. & Private Companies – 29 million;
- Industry Growth Rate – 4.3%.
Population – 23.79 million;
- Land Area – 35,410 sq. km (13.672 sq. miles);
- Density – 672 sq. km.;
- Coastline Length – 1,566.3 km.;
- Exclusive Economic Zone – 83,231 sq. km.
- Literacy Rate – 98.87%;
- GDP (current prices) – TWD.18,854.26 billion
  (≈US$562.045 billion);
- Per Capita income (current prices) – TWD.794,639.56
  (≈US$23,688.19)
India – Taiwan Relations

Since 1995, India-Taiwan relations have been improving gradually. Between 1995 and 2014, the bilateral trade turnover has grown manifold from just **US$934 million** to **US$5.91 billion**.

Both sides have also expanded educational exchanges after a mutual degree recognition agreement in higher education.

In the field of science and technology, there are more than thirty ongoing government-funded joint research projects.

The Taiwan-based Foxconn, one of the largest hardware manufacturers in the world, announced an investment of US$5 billion in India.

In order to further promote people-to-people exchanges between the two countries, Taiwan decided to grant visa-free entry to the Indians who hold valid visas or permanent residences for US, UK, Canada, Japan, Schengen Convention countries, Australia or New Zealand.

On the other hand, India has recently added Taiwan to its e-tourist visa programme to simplify the visa application for Taiwanese visitors.
India – Taiwan Bilateral Trade

**TRADE WITH TAIWAN**
Total amount in 2018–19 (Apr–Feb) $ billion

- Total exports: 2.45
- Total imports: 4.19
- Total bilateral trade: 6.64

**LUCRATIVE DEAL**

<table>
<thead>
<tr>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral fuels</td>
<td>Heavy machinery</td>
</tr>
<tr>
<td>Iron &amp; steel</td>
<td>Electrical machinery*</td>
</tr>
<tr>
<td>Aluminium, products made from it</td>
<td>Plastic and articles made from it</td>
</tr>
</tbody>
</table>

* includes machine tools

Source: Commerce Ministry
Financial Requirement

- Indian – Taiwan relationship at an advantageous position.
- Need huge investments together with the ‘Make in India’ ‘Digital India’ and ‘Smart Cities’ to enhance the sector’s contribution in GDP and bilateral trade volumes of both countries.

We need a best practice or strategy to meet the needs presented by the identified funding gaps.
"Secured Governance offers a strategy for the government to get all the basic infrastructure development with a negligible investment by the Government. It is a concept of developing Techno Economic Corridors connecting HUBs (Smart Cities) which will act as growth centre for individual sectors. The very concept of “Secured” here implies a secured convergence or knitting with various sectors defining a growth for an economy.”

- Harnessing the Untapped Growth Potential of the Nation.
- Achieving Growth through Convergence of Multiple Sectors.
- Infrastructure Development with Minimal Govt. Investment.
- Setting up Hubs (Smart Cities), Mini Hubs and Nano Hubs Nationally.
We propose 200 - 500 Smart cities (HUBs) with a techno Economic Corridor to meet the demand.

India will need a whooping investment especially in Infrastructure development Projects and Urbanisation under Secured Governance Projects.

Secured Governance offers a strategy for the government to get all the basic infrastructure development with a negligible investment, through a centralized selection process of developer or set of developers.

The investors will draw returns form the project based on value created by the system which covers the project cost and yet gives opportunity for investors to device models to commercialize the project and gain profits from the valuation of infrastructure.

India urban population has increased from 286 million in 2001 to 320 million in 2011 and is expecting to touch 530 million 2021.

Set – up a Mini HUB in all the districts & Nano HUB in all the villages in India for regional development.
Greenfield Model & Brownfield Model Smart Cities & Challenges

Smart Sustainable Cities (SSC) Transformation Models: Greenfield & Brownfield Models

- **Greenfield Model**
  - Create the New Rules
  - Create Cities from Scratch

- **Brownfield Model**
  - Change the old Rules
  - Applied on Existing Cities

**NEW SSC**

- **Challenges**
  - Difficulties in land acquisition;
  - The prospect of heavy sums of private sector finance, either domestic or foreign will be a challenge;
  - Lack of realistic objectives, financial management, project governance, and equality in risk management.

**Existing City Becomes a SSC**

- **Challenges**
  - Limited land & high population density;
  - Large slum development;
  - Difficulties of widening of roads for smooth traffic;
  - Complexity challenges: Too many Cooks, No Chef.
AD Va ntag e of Wasteland for Infrastructure Development

- Increase the value of wastelands;
- Avoid agriculture or forest land acquisition for infrastructure development;
- Migration will be reduced near rural area;
- Involvement of local people at Grass-root level and improvement of economic status of the local people.
Blue Economy Concept & Assets in India

“Blue Economy” is Water-based economic development that leads to improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

India has an Exclusive Economic Zone (EEZ) of about 2.37 million Sq. km.

Blue Economy Activity:

✓ Tourism;
✓ Fisheries;
✓ Renewable Energy;
✓ Biotechnology;
✓ Oil & Gas Mining;
✓ Seabed Mining;
✓ Shipping Industry;
✓ Defence Industry.

Coastal length – 7,516.6 km.
Major / Non – major Ports – 12 / 187;
Coastal States / UT – 09 / 02;
Number of Islands – 1,208;
Coastal district population – 171 million;
Coastal Wetlands – 43,230 sq. km.
Major Estuaries / Lagoons – 97 / 34;
Mangrove Area – 6,740 sq.km;
Area Covered by MPA – 6,271.2 sq.km.
Marine Fishing villages – 3,288;
Fisherman Population – 4 million;
Navigable River & Canal length – 14,500 km.
Total area of Reservoirs – 29.26 lakh ha;
Total area of Tanks & Ponds – 24.40 lakh ha;
As per survey report there are around 15 islands area in range between 60 sq. km to +1500 sq. km. Smart cities will be built in these 15 islands for Economic growth.

✓ Islands could be allocate to all Indian states on the population ratio for Economic development.

✓ 1,208 Islands in India
<table>
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<tr>
<th>SECTOR KEY CHALLENGES</th>
<th>SECURED GOVERNANCE MITIGATION MECHANISM</th>
</tr>
</thead>
</table>
| **Road Transport Sector:** | ✓ Minimal investment by Government;  
| - Lack of sufficient road infrastructure; | ✓ Private sector will invest for road construction; |
| - Huge investment required; | ✓ Private sector will get land area near to road side which would be equal to road construction cost with additional FSI permit; Land value will increase with in 3 to 5 years more than 3 times of construction cost; |
| - Traffic congestion & Environmental impact; | ✓ No toll collection; |
| - Road safety is serious concern. | ✓ Additional revenue from proper installation of Billboard advertisement (Per annum around **INR 48,000 crores (US$7.2 billion)** from 2.68 million billboard); |
| | ✓ **30** Transport HUBs spread all over India; |
| | ✓ A Nano HUB at a 100 km of regular intervals; |
| | ✓ A Mini HUB at every 5 km distance of roads. |

**Transport HUBs:** Area – 500 to 1000 Acres; All transport related manufacturing units, vehicle registration, Automobile research & development centre, Driving license with UID centres, Tyre manufacturing units etc.

**Nano Transport HUBs:** Area – 5 – 10 acres; It facilitate additional supportive Road amenities and revenue verticals such as motorway service areas, Energy refilling station, roadside station, parking facilities, 15 bed hospital, Hotel (50 rooms) etc.

**Mini Transport HUBs:** 1000 – 2000 sq. mtrs. Small stationary store, emergency telephone and cyber café, mini food court & medical store etc.

**Research Findings:** Digital billboards actually saw a decrease in traffic accidents by a rate of **4%** over that same five year period. The average number of accidents per month decreased after reformatting of the board by **6.6%**. [Source: http://ksmmedia.com/what-we-think/insight/articles/ksm-digital-billboard-study/]
SECTOR KEY CHALLENGES

Railway Transport Sector:

- With a fiscal deficit of INR. 32,067 crores.

SECURED GOVERNANCE MITIGATION MECHANISM

- Construct commercial HUBs (2 lakh sq. feet in the first 5 years) above the railway stations; These stations areas’ place value is very high due to a large mix of functions such as offices, shops, services, dwellings, café’s and restaurants in the vicinity of these kinds of railway stations;
- Additional revenue through properly placed advertisements inside the passenger coaches and all railway stations;
- Branded and unbranded retailing’s to be promoted inside the passenger trains.

Additional Revenue from Railway HUBs:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Number of stations</th>
<th>Rate per sq. feet</th>
<th>Total Revenue (in INR. Crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A1</td>
<td>58</td>
<td>45,000</td>
<td>522,000</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>284</td>
<td>20,000</td>
<td>113,600</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>237</td>
<td>10,000</td>
<td>47,400</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>429</td>
<td>5,000</td>
<td>42,900</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
<td>932</td>
<td>1,000</td>
<td>18,640</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,940</td>
<td></td>
<td>744,540</td>
</tr>
<tr>
<td>SECTOR KEY CHALLENGES</td>
<td>SECURED GOVERNANCE MITIGATION MECHANISM</td>
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</table>
| **Power Sector:**    | ✓ 20 Power HUBs spread all over India (manufacturing of power associated machineries R & D labs etc.);  
                        ✓ Aggressively expand large – scale deployment of renewable energy;  
                        ✓ Implementation of modern Security technology.  |
| ▪ Mounting T&D losses and operational inefficiencies have adversely affected the financial health of State Discoms. | |
| **Telecom Sector:**  | ✓ 5 Telecom HUBs spread all over India;  
                        ✓ Mobile phone and communication accessories manufacturing units in their massive infrastructures for additional revenue.  |
| ▪ Government companies are plagued by declining revenues. | |
| **Tourism Sector:**  | ✓ 40 Tourism HUBs spread all over India;  
                        ✓ Theme parks, Amusement park, Tourist guide institutes near to major monuments.  |
| ▪ Lack of adequate marketing & promotion;  
  ▪ Insufficient infrastructure in hospitality sector;  
  ▪ Security issues. | |
<table>
<thead>
<tr>
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<th>SECURED GOVERNANCE MITIGATION MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education Sector:</strong></td>
<td>✓ 10 Education HUBs spread all over India;</td>
</tr>
<tr>
<td>▪ Government expenditure on education;</td>
<td>✓ Utilizing the maximum FSI benefit in Government Institutes could help to bring several allied ventures/institutions in the existing infrastructure by private parties. Allowing the FSI area to be used for educational &amp; allied activities to generate extra revenue;</td>
</tr>
<tr>
<td>▪ Lack of Infrastructure facilities.</td>
<td>✓ Skill development institutes are necessary in all districts of India to promote sustainable remittance;</td>
</tr>
<tr>
<td></td>
<td>✓ 5 Sports HUBs spread all over India;</td>
</tr>
<tr>
<td></td>
<td>✓ Sports goods manufacturing units &amp; sports training centres in rural areas.</td>
</tr>
<tr>
<td><strong>Healthcare Sector:</strong></td>
<td>✓ 5 Healthcare HUBs spread all over India;</td>
</tr>
<tr>
<td>▪ Sector landscape is the high out-of-pocket expenditure;</td>
<td>✓ Mostly public hospital are prime area in cities of India. Provide additional FSI and engage them healthcare related industries in the same premises for additional revenue.</td>
</tr>
<tr>
<td>▪ Demand for Basic Primary Healthcare and Infrastructure is high.</td>
<td></td>
</tr>
<tr>
<td><strong>Agriculture Sector:</strong></td>
<td>✓ 25 Agriculture HUBs spread all over India;</td>
</tr>
<tr>
<td>▪ Lack of economical irrigation technology;</td>
<td>✓ Promote agriculture related small scale industries in all rural areas. Make awareness of modern technology in agriculture sector;</td>
</tr>
<tr>
<td>▪ High post-harvest losses.</td>
<td>✓ Build sustainable storage &amp; warehousing in taluka level.</td>
</tr>
</tbody>
</table>
Skill Development – A Life Cycle Perspective

Skills development can fruitfully be viewed from a life-cycle perspective of building, maintaining and improving skills. The essential stages can be summarized as follows:

Children: building important foundation skills through early childhood and initial education, keeping in mind that the benefits of these investments will be reaped in the longer term.

Young people: consolidating foundation skills and gaining important workplace skills and experience for a successful transition from school to work.

Mature and older workers: maintaining and upgrading existing skills and gaining new skills while also certifying the skills and competencies acquired in the working life.
I. Industry Relations for Students :-

• Each Student will have strategic Industrial tie-up from the 1st day of their Academics year. And Industries will facilitate professional Assistance and Future placement requirement for selected Students. Here the student should get recognition to these Industries as part of Center of Excellence.

II. National Expansion :-

• We need a strategic mechanism to seek more and more Industry Participation to add value to the existing set of expertise. More Number of Industry experts have to be drawn to create a knowledge bank for the institution.

III. Student Exchange Programs and Global Tie ups :-

• Businesses worldwide need management graduates who have the tools to succeed globally – leadership skills, cultural awareness, foreign language proficiency, and an understanding of how the global marketplace functions.
Public & Private Role Facilitated by Government

1) In parallel with public sector efforts, 100% private or foreign companies investment has tremendous potential to contribute national growth;

2) Government will play a complementary role of monitoring, facilitator & supervisory role for creating a conducive environment for private developers;

3) Investor will get the piece of land vicinity to developed project which would be equal to construction cost with extra FSI permission.

4) Smart Cities are the engine of productivity growth, creating productive jobs and higher incomes.

Secured Governance Interweaves into the current EPC (engineering, procurement and construction) Model TO ENHANCE OVERALL PROFITABILITY
Expected Results

• Assessing long term financial viability through interdependent key sectors;

• Commencement of detailed structure planning and infrastructure coordination for key strategic for the growing demand.

• More engagement through private participation enhancing the proposed project.

• Usage of Government funds can be optimised as development will be diverted from private participants.

• Structured & Integrated development enhances the multi sectoral productivity.
Secured governance strategy could enhance both India & Taiwan in World happiness index position.

Key factors of World Happiness Index

- Self-Reported Behaviour
- Freedom to make life Choices
- Perceptions of Corruption
- Healthy life Expectancy
- Generosity
- Social Support
- GDP Per Capita
Taiwan is known for hardware manufacturing while India has an established software industry; some even refer ‘India and Taiwan’ as IT to indicate the fact that both countries complement each other.

Taiwan has for long been a world leader in high-tech hardware manufacturing, and is able to contribute much to the “Make in India”, “Digital India” and “Smart Cities” campaigns. Apparently, India is yet to explore Taiwan’s vast technological potential.

Taiwan’s agro-technology and food processing technology will also be very beneficial for India’s agriculture sector.
Significant both India & Taiwan ........ (2/2)

Equipped with Taiwan’s technology and experiences, India can reduce maximum post-harvest losses of fruits & vegetables in India and enhance it’s rural areas and agriculture.

India has abundant natural bamboo resources while Taiwan owns the world-class bamboo charcoal technology. With this sort of technology, India can make use of its bamboo resources to produce high value-added goods.

Both sides need to work out plans to set-up **HUBs, Mini HUBs & Nano HUBs** in India & Taiwan and pep up bilateral trade volume from **US$6 billion** to **US$20 billion** in short period and increase economic cooperation between the two nations so as to take advantage of the joint strength.
Words of Appreciation

Dr. A. P. J. Kalam felicitates Dr. P. Sekhar for his outstanding contribution towards society & technology.

Narendra Modi
Hon’ble Prime Minister of India

“...An exhaustive effort for over-viewing Gujarat since its origin to its latest status of robust development in the national perspective. I congratulate Dr. P. Sekhar... for his conceptualized creation...”

Forwword Note for Dr. P. Sekhar’s Book on Gujarat in National Perspective

Shri. Devendra Fadnavis, Chief Minister Maharashtra

Book on Secured Techno-Economic Growth of Nagpur-A Super Smart City

This book helps comprehend various dynamics of Nagpur as Super Smart City and unlock the hidden potential growth by providing meaningful actionable solutions for implementation to enhance economic prosperity and quality of life through the concept of Security Governance.

Shri. Nitin Gadkari, Minister of Road Transport Highways & Shipping, Government of India

Book on Secured Techno-Economic Growth of Nagpur-A Super Smart City

... I look for the people at large reading this book and benefitting from the same & wish all the success in corporation’s endeavors in transforming Nagpur into a Super Smart City

Sh. Prakash Javadekar, Member of Parliament, Spokesperson, BJP

Book on Security Requirements of India-A Global Perspective

...I really appreciate the kind of effort and elaborate exercise Dr. P. Sekhar has taken up in bringing out this book... In my view... this will always be remembered as one of the pioneering work at the time when we as a nation are taking nascent strides for being technologically secured and equipped...

Jimmy Delshad, Former Mayor of Beverly Hills, California (USA)

Book on United States of America-Global Perspective

...It was most notable to understand contributions of Dr. Sekhar towards creation of unique development mechanism for National Development... Secured Governance will help in boosting the economic growth not only for developing nations but will also help extensively in developed countries.
Your Queries Please!!!