AMARAVATI
DEEP DIVE WORKSHOP

14, 15 DECEMBER 2017
THE GATEWAY HOTEL, VIJAYAWADA

Liveability | Economic Powerhouse
Infrastructure | Governance

Health City

Proposed vision for the Amaravati health city

"To become one of the top 3 healthy cities in the world, a preferred medical & wellness tourism destination anchored on excellence in health, research, innovation and education"

	Amaravati in 2036	Benchmark city -2017
Medical tourists	~1.2 million	Thailand
No. of health startups/ discoveries	~300 startups funded	USA[1]

1 https://rockhealth.com/reports/2016-year-end-funding-report-a-reality-check-for-digital-health/

Elements of healthcare – Market in India

AMARAVATI
THE PEOPLE'S CAPITAL

De-prioritised for Amaravati because Vizag is existing hub Enabler

1 Healthcare delivery and Diagnostics

USD 27 billion by 2020[3]

~200,000 hospitals

~2,760 blood banks

~60,000 diagnostic labs

2 Wellness and alternate medicine

USD 22 billion by 2020

~2,300 wellness spas in India

~3,600 AYUSH hospitals

3 Medical education

~460 colleges

4 Senior homes

USD 1.9 billion by 2020

~10,000 units

5 Healthcare IT, startups and research

USD 1.5 billion by 2020

~200 startups funded in 2014-16

6 Health Insurance

USD 2 billion by 2020[2]

5 standalone health insurance players[1]

7 Pharmaceuticals

USD 55 billion by 2020

~10,500 manufacturing units

8 Medical devices and implants

USD 8.6 billion by 2020

~800 Implant manufacturers

3 Medtech parks

1 Star Health and Allied Insurance, Apollo Munich Health Insurance, Max Bupa Health Insurance, Religare Health Insurance, and Cigna TTK.
2 http://www.newindianexpress.com/business/2017/oct/03/standalone-health-insurance-market-to-touch-rs-20000-crore-by-2020-1665886.html
3 Including hospitals and diagnostic centers

Pillars of the Amaravati Health City

To become one of the top 3 healthy cities in the world, a preferred medical & wellness tourism destination anchored on excellence in health, research, innovation and education

1 Health Care Delivery	2 Wellness and Alternative Medicine	3 Medical Education and Research	4 Healthcare IT / Healthcare startups	5 Senior Homes
▪ Hospitals ▪ Diagnostic Labs ▪ Blood/Organ Donation banks ▪ Chemists	▪ Wellness Center ▪ Yoga & Meditation ▪ AYUSH hospital ▪ Resorts, Spas	▪ Medical College ▪ Nursing Colleges ▪ Training institutes ▪ Research Center	▪ Tele-medicine ▪ Innovation hub	▪ Senior Homes

Enabling Healthy Lifestyle: Cycles, Organic food

Preventing disease and accidents: Clean air, safe roads

6 Support Companies: Health Insurance

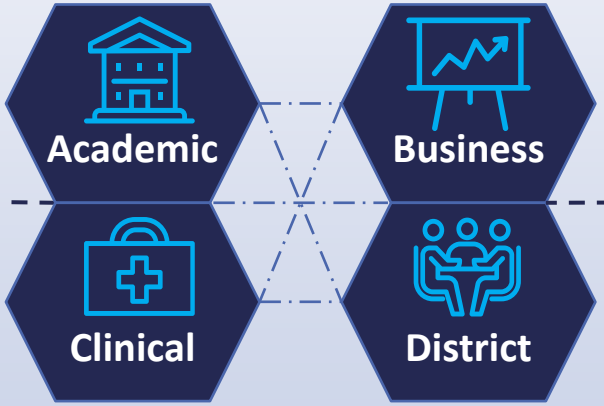
Amaravati to tap into the opportunity of growing medical tourism

Opportunity for Amaravati

- **Medical Tourism in India** is estimated to **grow to USD 8 billion by 2020**
- Medical tourists **typically visit India for tertiary care and super-specialty treatments**
- There is **potential to tap ~5-10% of that medical tourism market**

Way forward – Build a Single Collaborative Ecosystem with all facilities in one campus

- Medical, Nursing and Training colleges
- Research labs



- Start-ups
- Incubators, Innovation Hubs
- Health insurance

- Super-specialty
- Diagnostics
- Blood/ Organ banks
- Pharmacies
- AYUSH hospitals

- Convention centers
- Fitness parks, gyms, yoga studios
- Organic and natural food
- Wellness spas, resorts and retreats
- Senior homes

1 Low cost, high quality treatments with shorter waiting periods are key differentiators

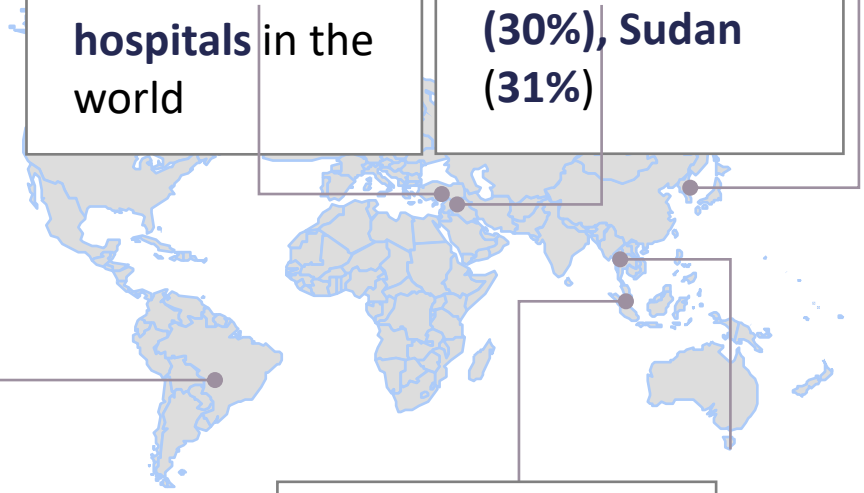
AMARAVATI
THE PEOPLE'S CAPITAL

Turkey
- **Low cost** (42% of US)
- **Highest number of JCI-accredited hospitals** in the world

Jordan
- **Low cost** (33% of US)
- Tourist origin: **Iraq (38%), Palestine (30%), Sudan (31%)**

South Korea
- **Asian plastic surgery capital**
- **Council for Korean Medicine Overseas Promotion** (CKMP)

Brazil
- **2nd largest market for plastic surgery**
- **good quality: 20 JCI hospitals**
- **Proximity to US, no visa**



Thailand
- Tourist origin: **US (33%), China (29%), Japan (18%), UK (14%), and ME and Australia (6%)**

Singapore
- Tourist origin: **ME (50%), Asia (45%) and Europe (5%)**

SOURCE: Web and press search; team analysis

1 Amaravati can emerge as a hub for tertiary care

Way forward

- **Invite leading tertiary care hospitals** to set base in Amaravati and **facilitate low cost treatment**:
  - Mark a dedicated **zone of ~200-250 acres of land** for development of **one single campus housing all facilities**
  - Provide **land at subsidized prices and tax rebates** – like exemptions on stamp duty, registration, etc.

- The Government can **help in demand generation**:
  - Separate **immigration centre and facilitating desk at Vijayawada airport** for medical tourists visiting Amaravati
  - **Ensure direct flights to countries** that are the key source of medical tourists;
  - **Sign MOUs with international governments** – e.g., **Chennai has signed MoUs with Tanzania, Uganda, Kenya**,

- Incentivize hospitals to provide **high quality treatment** and **build international credibility** through **accreditation** like **Joint Commission International**

- Encourage development of new technologies for high-quality treatment and low cost alternatives by becoming a **hub for research and innovation**

1 JCI charges average fee of $46,000 for a full hospital survey. Reimbursement for surveyors' travel, living expenses, and accommodations is required in addition to the survey fee.

1 Amaravati can emerge as a hub for tertiary care

Way forward

- Develop an entire ecosystem for medical tourism and leverage the tourism industry infrastructure and setup:
  - Translators – **Tie-up with schemes like National Translation Mission** (run by Central Institute of Indian Languages) for to develop local talent in Amaravati
  - Travel agents, tourism agencies, and tourism spots will be developed as part of the tourism strategy – and will also create a pull

- Launch **an integrated marketing campaign** that promotes Amaravati as **'Heathy, Happy City'**
  - Amaravati to be promoted as a complete ecosystem
  - The Government can **launch a medical tourism portal** (like Dubai):
    - **make an appointment** for comprehensive medical packages for a wide range of medical specialties and services
    - **events calendar** to announce all upcoming conference, meetings and workshops
    - **Extensive travel information** to ease the trip planning process including hotel, F&B, and cab booking details
    - **Facilitate travel process** by linking to travel agencies

1 JCI charges average fee of $46,000 for a full hospital survey. Reimbursement for surveyors' travel, living expenses, and accommodations is required in addition to the survey fee.

2 Medical Education will be necessary to develop requisite talent

Way forward – Establish a holistic medical education system

Medical Education

Elements of Medical Education	Core Medical	Allied	Ancillary
	I) Education of doctors • Medicine and Surgery • Dental **II) Others** • Nursing • Pharmacy	Courses to provide support services to core medical personnel: Para Medical, Lab Technology, Radiation Therapy, Physiotherapy, Nutrition and Dietetics, etc	Courses related to effective management and administration of health institutions: Health Management and Hospital Administration, Public Health, Health Information Management, etc
Proposed Plan	• Incentives • Provide scholarships/ awards [1]	• Clubbed with existing universities • Stand-alone training centers	• Explored in conjunction with Knowledge City

1 Gujarat for instance has free medical education for girls. AP Govt. could look at regulating fees structure accordingly – to balance attracting the best students as well as keep it profitable for colleges

3 Wellness and Alternate medicines is an upcoming trend in India and globally

New Needs	Increased focus on preventive	▪ **Fitness services growing at 25-30%** ▪ Supplements is a INR 1800 cr market growing at 25%
	Higher prevalence of lifestyle diseases	▪ **Scientific slimming services are INR 3500 cr market** growing at ~23%, given India is **3rd largest obese country**
	Preference for natural therapies	▪ **Patanjali is a INR ~2500 crore** company in India growing at a 2012 -2015 CAGR of 65%
New Segment	Male and the geriatrics	▪ **Male cosmetics market** expected to **reach INR 3000 crore** by 2016
New Players	International players are entering	▪ **Vibes** is a German **beauty-slimming chain** present in 8-10 metros cities today
	Health apps, online dieticians, and other unique players	▪ **Fitbit with a 20 million** global user base was expanded to India 3 months ago ▪ Apps like myfitnesspal have a global user base of >75 mn

3 Amaravati would offer an integrated wellness and alternate medicine offering

Way forward – Develop a comprehensive offering

	Ayush therapy	Health & fitness	Beauty	Enhancement
Services	▪ Ayurveda ▪ Homeopathy	▪ Fitness ▪ Spas	▪ Salon ▪ Skin treatments	▪ Hair transplant ▪ Slimming ▪ Cosmetic surgery
Personal products	▪ Skin care ▪ Hair care ▪ Skin care		▪ Colour cosmetics ▪ Fragrance ▪ Slimming	
Medicines	▪ Ayush medicines		▪ Herbal and other supplements	
Foods	▪ Low fat dairy ▪ Fortified foods ▪ Organic		▪ Better for you ▪ Naturally healthy ▪ Food intolerance	

3 Amaravati would offer an integrated wellness and alternate medicine offering

Potential partners

Somatheeram™

B.K.S. IYENGAR YOGA
THE PATH TO HOLISTIC HEALTH

ANANDA
YOGA + WELLNESS
your om away from home

- Amaravati can **leverage its existing scenic beauty and invite well known trusted names** in Phase 1
- **Develop tourism and sports activities** such as water rafting, hiking – these have pulled wellness tourists to destinations such as Uttarakhand
- Develop **supporting companies** like Travel agents and infrastructure like Hotels, etc.
- Enter into **collaborations with other State governments as well as International governments** – to exchange knowledge, expertise and training in various areas

1 https://www.franchiseindia.com/wellness/8-wellness-trends-to-watch-out-for.10234
2 https://www.franchiseindia.com/wellness/7-Wellness-trends-grabbing-the-spotlight-in-2017.9261

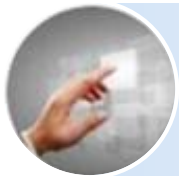
Healthcare IT is enhancing quality of care and saving lives

Pervasive Sensing Technologies

- Pervasive **miniaturized sensor networks for continuous monitoring** that helps clinicians **provide daily guidance**[4]

On-Demand Computing/Info Access

- Shift to an **information-centered care model** with **extensive information sharing and processing**, which is enabled by **cloud computing**



Interactivity & User Interfaces

- **Interactive visualisation of patients'** health indicators, instead of the usual review of multiple disparate medical reports

Hyper-connectivity

- Hyperconnected communication is **enabling remote, real-time patient monitoring**

Miniaturization of devices

- **Medical devices** are being made **smaller, lighter, more portable, and more affordable for remote clinics** in rural settings

4 Amaravati can become the hub to promote innovation and startups

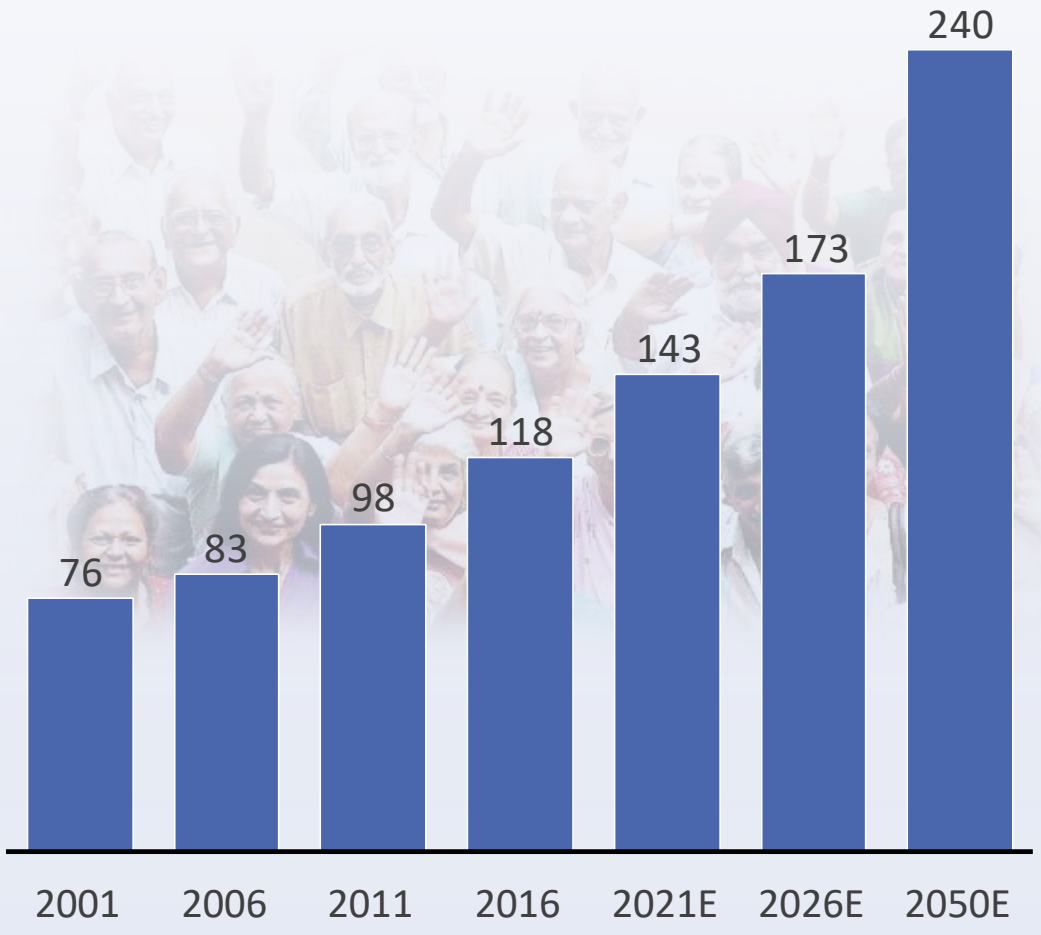
Way forward

- Capture the **right needs** for patients, payers and providers to accordingly **generate ideas**:
  - **Organize conferences, workshops and meetups** to **voice different problems and unmet needs** in the healthcare ecosystem to inspire development of the right product
  - Introduce an **annual hack-a-thon**, with awards including mentorship, funding etc.
- **Ensure access to capital:**
  - The Government can **Co-Invest in startups with leading venture capitalists**
  - Alternatively, the government fund prize money of **competitions**, organized in partnership with leading educational institutions, with specific objectives
- **Facilitating a business**
  - Establish a **facility to house startups**.
- **Access to Market**
  - Since the entire healthcare environment will be situated in the same campus, healthcare startups will get real time access to market

1 JCI charges average fee of $46,000 for a full hospital survey. Reimbursement for surveyors' travel, living expenses, and accommodations is required in addition to the survey fee.

5 Senior Homes Segment is an upcoming and untapped opportunity in India, $7.7 billion by 2030

Projected Growth in number of senior citizens (above 60) in India



Key trends

- 3/5 Indian households, i.e., about **63% are nuclear families**
- Currently there ~35 senior living projects in the country, accommodating 0.0001% of India's senior citizens as compared to 10% in the US and approximately 4% in Australia
- **Supply for these homes is ~10,000**; against **expected requirement of ~3,12,000**
- **South India is the preferred destination**

1 Assuming a constant exchange rate of 1 USD = 60 INR

SOURCE: McKinsey analysis, Fitch, Crisil, CII Healthcare report

5 Amaravati can leverage its healthcare ecosystem and provide best-in-class services in its senior homes

Opportunity for Amaravati

- **Healthcare is a paramount need for senior homes- Amaravati can leverage the healthcare ecosystem** in the city to become a hub for Senior Homes in India

Way forward

- **Attract Developers**: **Ease of land acquisition**: allocating land specifically for this purpose, exemptions on stamp duty, etc.

~800 units across 4 projects in Pune	*Riva, Bangalore*	*Dehradun*

5 Senior homes

Way forward

- **Introduce a single-window mechanism for the elderly**: to enable them to obtain all facilities, including life insurance, health insurance and information about senior living apartments under one roof
- **Develop dedicated human resource**. Amaravati could leverage vocational training programs and existing institutes/set up institutes for this
- **Amaravati's positioning to compete is being one of the healthiest and livable cities**:
  - **Healthcare Accessibility**:
  - **Social Ecosystem:** Temples, malls, entertainment and recreation facilities, clubs and societies
  - **Connectivity:** Well-connected to city nodes, activity hubs and workplaces
  - **Aesthetic Ecosystem:** Presence of well-maintained public parks, roads, water bodies, visual image of built form, control of density, general cleanliness etc. found within locations in each corridor

1 JCI charges average fee of $46,000 for a full hospital survey. Reimbursement for surveyors' travel, living expenses, and accommodations is required in addition to the survey fee.

Government Action Plan - 2021

- Facilitate ***MoUs/Agreements*** with countries such as Bangladesh, Afghanistan, African nations to ensure their government sponsored treatments happen in Amaravati
- ***Reimburse cost of accreditation*** for hospitals for international accreditations like ***Joint Commission International***, and National accreditations like National Accreditation Board for Hospitals (NABH)
- Develop a ***cohesive marketing campaign*** to promote Amaravati as a ***preferred destination for medical and wellness tourism*** and ***launch a medical tourism portal*** for increasing convenience of travel
- Send a proposal to GoI to set-up a separate ***immigration centers and facilitating desks at Vijayawada airport*** for medical tourists visiting Amaravati
- Set-up a ***dedicated research fund*** to promote research in areas such as genome, cancer, diabetes to fund the research and develop infrastructure (labs) and set-up a ***co-investment fund*** to fund healthcare start-ups
- Invite top developers to build ***senior homes in a dedicated land parcel of 20- 30 acres*** identified by APCRDA