



## VISION 2022 ROADMAP FOR INDIAN AYURVEDA INDUSTRY

This paper analyses the current positioning and highlights strategic imperatives for the Ayurveda industry to transform itself and grow exponentially

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## FOREWORD

Modern therapies have limitations to completely cure chronic and lifestyle conditions. India's ambition to provide universal access and quality healthcare at an affordable cost mandates a paradigm shift in adoption of Ayurveda into the mainstream healthcare system.

Ayurveda's root cause management approach goes beyond just being a curative system of medicine to being a preventive and promotive healthcare system as well. The industry has gained recognition both in India and developed countries as an alternative system of medicine.

Despite having a strong advantage over modern therapies, the Ayurveda industry's growth trajectory remains subdued. There is a burning need to prioritize focus on products and services that can jump-start modest growth and triple the industry's market potential.

Frost & Sullivan and CII have partnered to undertake a Vision Roadmap study to identify mega pivots and growth levers that will unlock value in key industry segments and lead to decisive action with solid implementation.

This whitepaper is an outcome of multiple rounds of discussions with key stakeholders in the Indian Ayurveda Industry and CII leadership who have put an incredible effort into contributing to Vision Roadmap. We hope that this whitepaper will catalyze further discussions during the "MINISTRY OF AYUSH and CII AYURVEDA CONCLAVE" in achieving the objectives of the plan.



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## SETTING THE CONTEXT

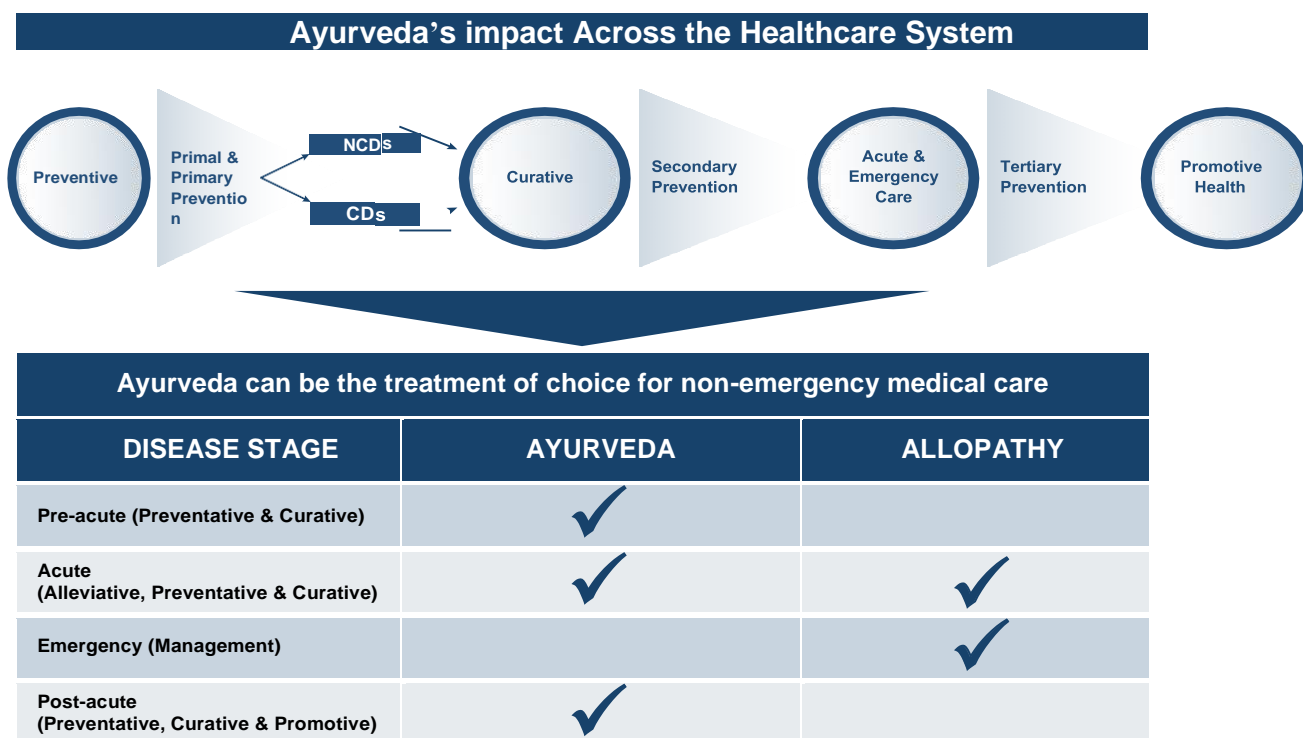
The healthcare market in India is evolving at a rapid pace. As per estimates, it is one of the fastest growing industries with an estimated compound annual growth rate (CAGR) of 23% from 2015 to 2020, and is expected to be a \$280 billion market by 2020<sup>1</sup>. Rising income levels, the growing geriatric population, greater penetration of healthcare in rural settings, and increasing health awareness with an emphasis on ‘preventative healthcare’, is expected to enhance the demand for healthcare services.

India’s National Health Policy aims at achieving Universal Health Coverage and delivering quality healthcare to all at an affordable cost. The policy aims at providing a comprehensive primary health package which includes major communicable, non-communicable and chronic diseases, geriatrics, palliative and rehabilitative care.

For a vast country like India, to achieve this goal with just the modern medicine system in place is a herculean task, as even modern therapies have their own drawbacks such as burgeoning costs, quality of life issues, and the inability to prevent and cure many diseases. However, Ayurveda can change this outlook of healthcare delivery by getting integrated into mainstream healthcare. As shown in Exhibit 1, promoting Ayurveda as a mainstream therapy approach can be used to bridge the burgeoning gap between demand and supply by primarily focusing on the secondary and tertiary prevention of diseases. In addition, the substantial opportunity in promotive health and restoration of functional health is best addressed by Ayurveda.

Shifts in healthcare expenditure and disease profiles provide Ayurveda a golden opportunity to be positioned as the treatment of choice for non-emergency medical care.

**Exhibit 1: Ayurveda’s Role in the Mainstream Health System**



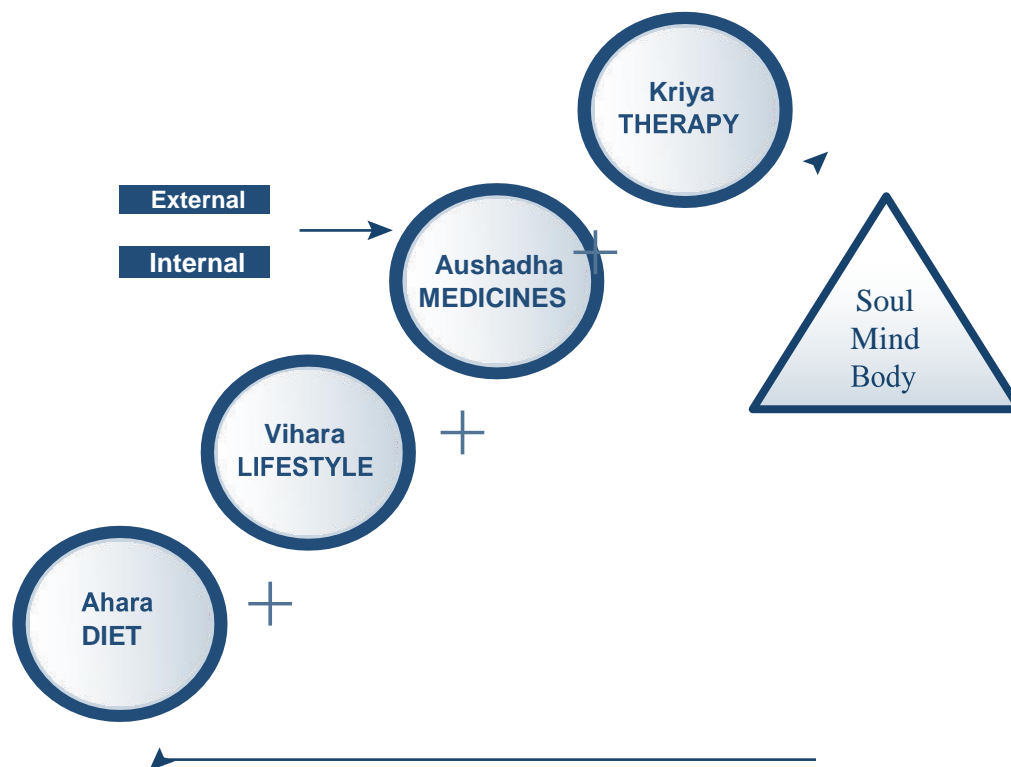
Source: AyurVAID Hospitals

<sup>1</sup> <https://www.ibef.org/industry/healthcare-india.aspx>

## AYURVEDA: ARE WE MISSING THE POINT?

Ayurveda management is based on the concept of root-cause diagnosis and management. As shown in Exhibit 2, it treats not only the physical aspects of the disease but also treats and manages the root cause of the problem, in contrast to the prevalent practice of mere symptom management. It goes beyond just being a curative system of medicine to being a preventive and promotive healthcare system as well. Classical Ayurveda encompasses all attributes of a mature and complete medical science including anatomy, physiology, pharmaceuticals, disease causation-evolution, and disease management. The aetio-pathogenesis of disease is established through a structured process of compilation of disease signs and symptoms, medical history, and clinical examination. Thereafter, a whole-body, systemic healing process attempts to restore homeostasis or good health by reversing the aetio-pathogenesis for not only disease cure but also for sustained wellbeing in body, mind, and soul dimensions. This comprehensive therapeutic approach or '**Chikitsa**' is uniquely personalized, and includes one or more of diet-lifestyle-medicine-therapies. Ayurveda's principles are universal and time-tested in its application to diseases prevalent in the 21<sup>st</sup> century, across the world.

*Exhibit 2: Ayurveda Industry, Treatment Approach and Services*

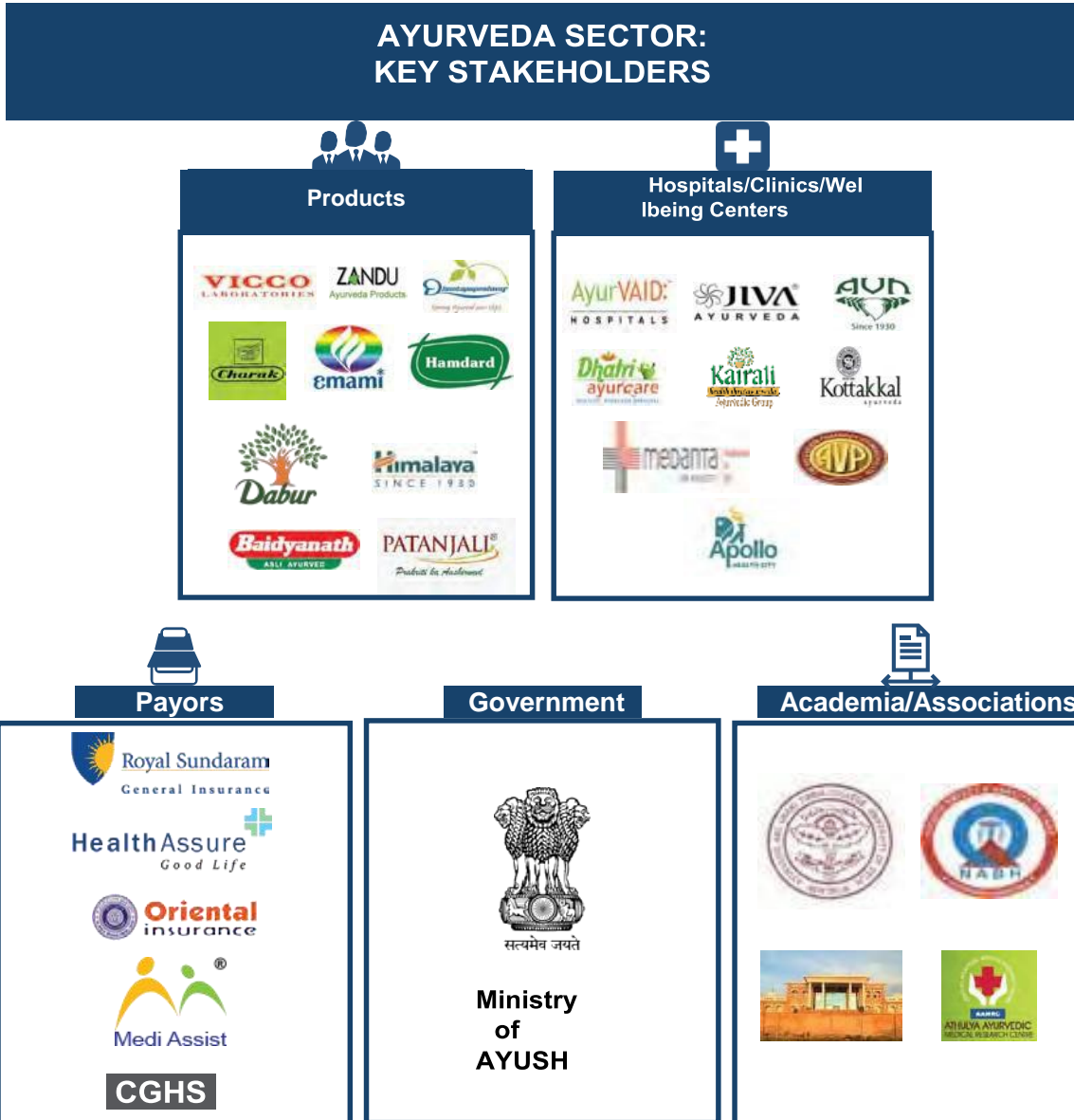


Ayurveda as “Ayurveda Chikitsa” focuses on root-cause diagnosis and management and always includes personalized diet and lifestyle tips.

## THE ECONOMIC GROWTH POTENTIAL

The Indian Ayurveda industry can be broadly categorized into the organized and the unorganized sectors. Large manufacturing product companies, hospitals, clinics, pharmacies, and authentic Ayurveda wellbeing centers constitute the organized Ayurveda sector. Also, several organized hospitality participants also include light Ayurveda therapies in their bouquet of offerings. Small manufacturing product units, raw material cultivators, local Ayurveda vaidyas, small exporters, local Ayurveda pharmacies, and extract manufacturers constitute the unorganized sector. Exhibit 3 illustrates the key stakeholders in the Ayurveda sector.

**Exhibit 3: Ayurveda Industry, Key Stakeholders**



As per Frost & Sullivan estimates, anecdotal evidence conjectured the total Ayurveda market to be approximately USD 3 billion<sup>2</sup> in 2016 and growing at a CAGR of 15-16%.

Source: Frost & Sullivan

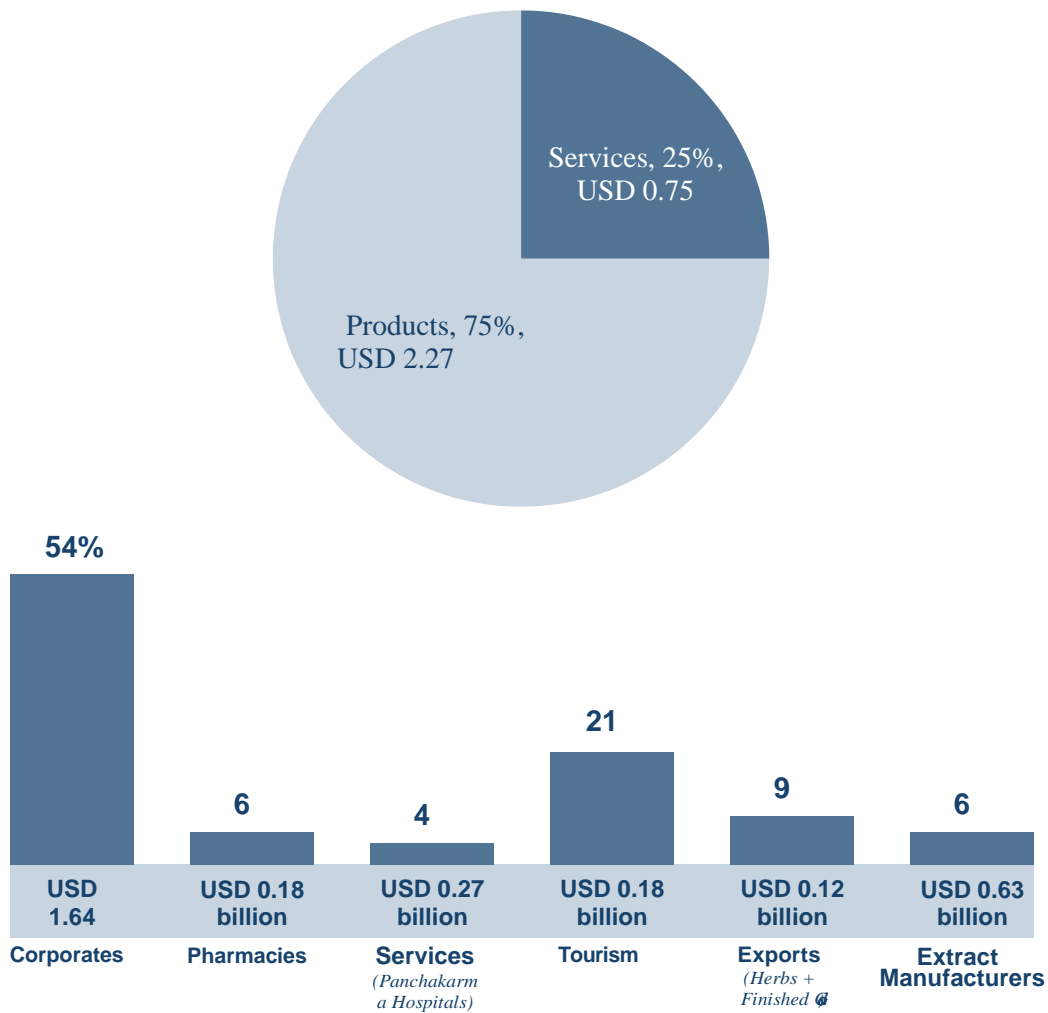
2 Calculations based on INR-USD average exchange rate in 2016; 1 USD = 67.08 INR.

As shows in Exhibit 4, the Ayurveda industry can be categorized by its market offerings into two broader categories:

- A) **Products:** Ethical, classical, OTC, personal care and beauty products
- B) **Services:** Medical, well-being, payor and medical tourism services

**Exhibit 4: Ayurveda Industry, Estimated Size**

Total market size: ~ USD 3 billion



Source: Frost & Sullivan (based on industry stakeholders' interviews)

## **AYURVEDA PRODUCTS**

The Ayurveda product segment (valued at approximately USD 2.27 billion in 2016) has been flourishing in India for many decades. Ethical products, classical Ayurveda products, fast-moving consumer goods (FMCG) and personal care products (including cosmetics) are the major categories being retailed. Some of the prominent blockbuster products include Chyawanprash, Triphala Churna, Ashwagandha, and Aloe Vera products.

Retail franchising has provided a big push towards the launch of Ayurveda companies. In addition, e-commerce is already playing a larger role in taking Ayurveda products to the masses. Market places such as Amazon, Flipkart, and other online pharmacies have collaborated with large corporates to retail their products to the masses.

## **AYURVEDA SERVICES**

The Ayurveda services segment (valued at approximately USD 0.75 billion in 2016) includes two broader categories.

**Medical Services:** This segment constitutes clinics, hospitals, and traditional family-run vaidyasalas offering curative services. Ayurveda is also integrated into the public health system across the country, especially at primary healthcare centers. However, its practice is starkly conspicuous by its absence. Ayurveda by its philosophies and principles can play a major role in preventative, curative, and promotive healthcare. Insurance coverage is increasingly being offered for Ayurveda hospitalization and medical care services. The Insurance Regulatory Development Authority of India (effective February 2013) has enjoined all health insurance companies to extend cashless coverage to National Accreditation Board for Hospitals and Healthcare Providers (NABH)-accredited Ayurveda hospitals. Furthermore, in September 2016, the Ministry of AYUSH in consultation with the Ayurveda hospital industry and major Indian health insurance companies announced a set of standard tariffs for common medical conditions. Today, the insurance sector is progressively increasing the share of Ayurveda coverage across corporate as well as retail insurance policies. Also, there is Central Government Health Services (CGHS) coverage for Ayurveda medical care already in place; however, rates have not been revised since 2008.

**Wellbeing Services:** Ayurveda originally committed itself to a two-fold purpose—disease reversal and health promotion. The latter, health promotion, is experiencing a paradigm shift brought on by a shift in consumer mindsets—from trying to achieve mere physical wellness to adapting a “wellbeing” approach that considers physical, mental/psychological, and spiritual health. With many countries incorporating spa therapies that include Ayurveda massages as part of their tourism promotion strategy, the unique differentiation potential of authentic Ayurveda wellbeing services has diminished in the last couple of decades. A radical new strategy is required to reposition Indian Ayurveda wellbeing services as a high-value, scientific and quality system-driven service. The introduction of NABH-accreditation standards for wellness/wellbeing centers is a powerful enabler available to the Indian wellbeing industry to differentiate itself from regional/global competitors and take a quantum leap from the current mass 'massage' (USD 150-250 per day) market to a 'high-volume-high-value' (USD 500-1000 per day) wellbeing market.

Insurance coverage is increasingly being offered for Ayurveda treatment and services; however, the coverage base is low. There are practical difficulties in standardizing the treatment protocols across a personalized practice approach



## UNLOCKING VALUE

Ayurveda's rich heritage and recognition as a complementary system of medicine in developed countries provides a good foundation to set an ambitious growth goal (tripling size) by increasing market share, customer access, and profitability in both India and global markets. Exhibit 5 provides insights into leveraging the industry's strengths and opportunities to meet the targets for 2022.

**Exhibit 5: Ayurveda Industry, SWOT Analysis**

### Strengths

- Root cause diagnosis and management for effective secondary and tertiary prevention of serious and widely prevalent diseases
- Worldwide recognition as a source for 'complementary' medicine
- Smaller product development time (3-4 years) as compared to conventional Pharma drugs (10-15 years)
- Strong manufacturing base

### Weaknesses

- Lack of globally accepted standards
- Not fully integrated with mainstream market
- Product quality variation

- Ayurveda coupled with medical and experiential tourism (potential for one billion tourists annually)
- Increased scope for innovation and change in approach for AYUSH therapies (leveraging mobile, Internet and telemedicine)
- Strong thrust on promotion by the government
- Global consumer trend towards herbal, organic, natural, and wholesome health solutions
- Geriatric care



- Rising brand recognition of alternate medicine systems such as Chinese, Latin and South American
- Competition from Sri Lanka to claim right to Ayurveda heritage

### Opportunities

### Threats

Source: Frost & Sullivan

**VISION ROADMAP TO ACHIEVE \$9 BILLION BY 2022**

With the need for the Ayurveda industry to transition towards precision root-cause diagnosis and treatment, certain key objectives need to be addressed. These include increasing the overall affordability and accessibility of medicines, attracting private investors, promoting Ayurveda hospitals and medical value travel, leveraging the potential of Ayurveda in preventative and curative healthcare, and creating a well-defined network for insurance and payors.

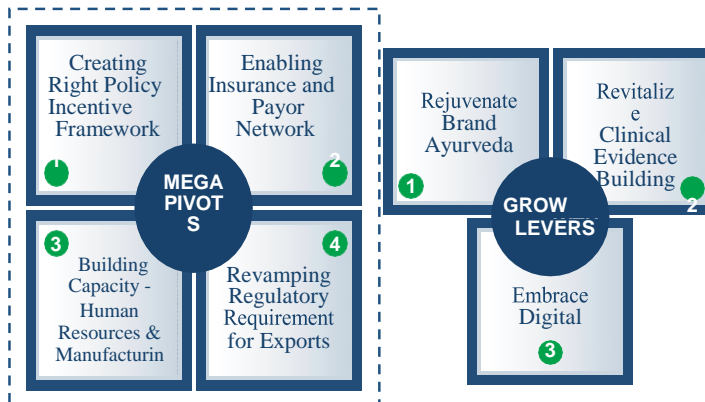
Exhibit 6 provides a strategic transformation framework to capitalize on key market segments and define growth objectives. Its success will depend on all industry stakeholders taking responsibility for the plan, led by product manufacturers, service providers and the Ministry of AYUSH.

*Exhibit 6: Ayurveda Industry, Strategic Transformation Framework*



This roadmap focuses on reshaping critical capabilities needed to transform the Ayurveda industry. Achieving mega pivots and growth levers (Exhibit 7) is not automatic, nor will they emerge if the industry continues its present trajectory. Acting upon these mega pivots and growth levers will enable the industry to realize the vision of tripling the Ayurveda market by 2022.

*Exhibit 7: Ayurveda Industry, Mega Pivots and Growth Levers*



“There is a need for the Ayurveda industry to be branded as a precision root-cause diagnosis and treatment system.”

- Rajiv Vasudevan, CEO, AyurVaid Hospitals

**Top Priorities**

1. Greater industry and government collaboration will globalize Ayurveda.
2. Ayurveda health is not just a diet, lifestyle, and medical issue. The clinical determinants, social impact and economic benefits of “therapy” need to be clearly articulated.
3. A major goal is to reduce the disease burden of three chronic diseases (hypertension, diabetes and arthritis) to manageable levels.
4. Human capacity is key: Doctors, nurses, and community health workers need to be appropriately trained, managed and deployed where they are most needed.

## CALL TO ACTION

The strategy will involve accelerating leadership in **traditional** product markets while exploring growth opportunities in **rising** services markets. While the former provides double-digit growth, the latter can offer triple-digit growth.

| Mega Pivot 1  | Strategic Imperatives  |
|---|--|
| <p><b>Creating the Right Policy and Incentive Framework</b></p> | <p><b>Policy Initiatives</b></p> <ul style="list-style-type: none"> <li>• <b>Formulate a comprehensive Ayurveda Industry Policy</b></li> <li>• <b>Leverage Information Technology (IT) and Biotechnology (BT) sector policy frameworks and initiatives</b> to attract big ticket (more than 100 crore) investments from Indian and global MNCs. Draw upon enabling inputs (monetary and non-monetary) for the Ayurveda sector, like successful precedents in IT/BT sectors.</li> <li>• <b>Establishment of National Ayush Mission (NAM)</b> would support the cultivation of increased number of medicinal plants on farmer's lands.</li> <li>• <b>Ayush Ministry to spearhead Public Private Partnerships</b> by opening the Ayurveda public health infrastructure to the private sector.</li> <li>• <b>Operationalize MOUs</b> between academic institutions and practicing hospitals/government research institutes.</li> <li>• <b>Establishing standard guidelines</b> for evaluation of clinical trials and pharmacovigilance centers for data collection and assessment of Ayurveda medicines.</li> </ul> <p><b>Incentives</b></p> <ul style="list-style-type: none"> <li>• <b>Infrastructure upgrades by transitioning to Current Good Manufacturing Practice (CGMP) certified centers and quality control processes by means of soft loans</b> or grants to the industry would propel funding.</li> <li>• <b>Provision of liberal tax incentives, new schemes (re-activated) and GST exemption</b> for promotion of R&amp;D, fund randomized controlled trials and manufacturing automation. Encourage private investment including incentives for large healthcare companies.</li> <li>• <b>Budgetary support and financial outlay</b> to establish more tertiary care Ayurveda hospitals in the next 5 years.</li> </ul> |

“The government and the stakeholders should take initiatives to improve the level of awareness about Ayurveda and its special capabilities among the public, and particularly among the younger generation for the future growth of the system.”

- Dr. P.M. Varier, Chief Superintendent & Additional Chief Physician, Arya Vaidya Sala

| Mega Pivot 2  | Strategic Imperatives   |
|---|---|
| <p><b>Enabling Insurance and Payor Networks</b></p> | <p>Insurance coverage for Ayurveda treatment practices will foster its demand and will be instrumental to bring it into the mainstream healthcare system.</p> <ul style="list-style-type: none"> <li>• <b>Uniform inclusion of Ayurveda</b> in 6 National Health Insurance schemes (RSBY, ESIS, CGHS, AABY, JBY, UHIS) and other proposed schemes.</li> <li>• <b>Implement the government order dated 29.10.2016 relating to guidelines for insurance coverage.</b> Get the insurance sector to initiate compliance with the government’s guidelines document.</li> <li>• <b>Showcase credible data to establish safety, efficacy, and cost for Ayurveda treatment of major chronic diseases</b> - hypertension, diabetes, and arthritis to enable the design of new insurance products based on the full, unqualified inclusion of Ayurveda medical care.</li> </ul> |

“The current insurance market covers only inpatient hospitalization. There is a market opportunity beyond this, which is holistic care.”

- Vidya Hariharan,  
Director-Group Strategy,  
Vidal Healthcare

| Mega Pivot 3   | Strategic Imperatives   |
|--|---|
| <p><b>Building Capacity– Human Resources and Manufacturing</b></p> | <p><b>Human Resources:</b><br/>Nurturing a base of well-trained and motivated human resources is an essential pre-requisite for even a modest scale-up of the Ayurveda sector. Even if the current output of Ayurveda doctors of approximately 14,000 doctors per annum were to be trained, it could make a significant impact. In 3-4 years, a base of approximately 40,000 doctors could be developed. Similarly, a concerted effort needs to be taken for training para-medical staff, who will be the engine of Ayurveda medical care provision. Ayurveda may take a leaf out of what has been achieved in the IT/BT sectors by aligning undergraduate, post-graduate, and continuing education with the needs of industry and government (products, services, pure and applied research). Bright talent must be motivated to join this sector. Finishing schools must be separately developed to help already graduated doctors to hone their understanding and clinical skills. Privileging of doctors and paramedical staff can be considered through planned programs in consultation with the NSDC and NABH/QCI.</p> <p><b>The government, with participation and support from Ayurveda industry and academia, must take up Ayurveda HRD on a mission mode.</b></p> <p><b>There is also a need to establish partnerships between the Rashtriya Ayurveda Vidyapeeth and MOOCs,</b> e-learning solution providers for the provision of certification courses in Ayurveda through for beginners, amateurs, and doctors.</p> <p>Appropriately integrated Ayurveda and Allopathy as a primary solution to deliver “<b>co-managed treatments</b>” for treatment of chronic diseases and neglected (yet critical) care pathways such as post-surgery or post-trauma rehabilitation, mental health, infectious diseases, and antibiotic resistant treatments could be the way of the future. Human-resource capacity-building measures should also consider this integrative aspect of Ayurveda and appropriately strengthen Ayurveda doctors and para-medics to work together collaboratively with modern medicine counterparts.</p> <p>Ayurveda doctors and paramedical staff will have to step up to take on the roles of <b>primary and secondary healthcare</b> providers across the country. Focused training in this respect that prepares them to effectively treat and manage the disease and health needs prevalent on region/state-wise basis.</p> <p><b>Raw Materials/Inputs:</b></p> <p>National Medicinal Plants Board (NMPB) to:</p> <ul style="list-style-type: none"> <li>• <b>Guarantee 100% resource availability</b> for minerals/metals/animal bi-products/wildlife classified species/imports. Government to encourage and support small-scale cultivation of herbs in the rural regions, which would open employment opportunities for youth.</li> <li>• Establish a corporation for procurement and trading of medicinal plants. This entity will             <ul style="list-style-type: none"> <li>o Cover various aspects of procurement of the genuine drug, collection, distribution, export and research.</li> <li>o Bring the trade of medical plants under a single roof thereby guaranteeing reasonable pricing and high quality raw materials.</li> </ul> </li> <li>• <b>Align efforts of State Medicinal Plants Board</b> and herbal medicine manufacturers to focus on essential herbs cultivation through the 80:20 principle.</li> <li>• <b>Institute a certification mechanism for raw materials</b> and form a market supply system. Establishment of government-certified raw-material supply centers in every state, which would help the manufacturers procure certified raw materials and extracts that comply with standards of Ayurveda pharmacopoeia of India.</li> </ul> |

“Mass cultivation of medicinal herbs is a potential market in the future. This will also help the industry for a sustainable collection of raw materials. R&D innovation should always be encouraged and newer dosage forms of herbal medicines must be encouraged by Ministry of AYUSH.”

- Dr. Vijendra Prakash, General Manager, Regulatory, Corporate Affairs, The Himalaya Drug Company

“The biggest promotion of Ayurveda would be to have many large hospitals in urban India demonstrating Ayurveda to the masses.”

– Ranjit Puranik, CEO, Shree Dhoot Papeshwar Ltd

| Mega Pivot 4   | Strategic Imperatives   |
|--|---|
| <p><b>Revamping Export Regulatory Guidelines</b></p> | <ul style="list-style-type: none"> <li>• <b>Developing standard monographs for international pharmacopoeia</b> (with the inclusion of modern methodologies such as TLC, GC, and PC electrophoresis) to ensure uniformity in the ingredient usage thus avoiding variations in batches.</li> <li>• <b>Harmonization of drug registration requirements</b> aimed at maintaining quality and safety of herbal products would help promote trade across the United States. <b>Centralization of Drug and Cosmetics Acts (DCA) policies</b> would ensure GMP guideline adherence by all companies.</li> <li>• <b>Rectifying the Indian patent office “guidelines</b> for processing of patent applications relating to traditional knowledge and biological material.”</li> </ul> |

“GMP WHO standards for manufacturing medicines are in place and gradually will be absorbed by the industry.

Similarly, clinical trials of medicines before introducing them into the market should be enforced gradually, at least for diseases like blood pressure, diabetes, heart disease and dyslipidemia, cancer and many more.”

- Dr. Rohit Sane, Founder,  
Madhavbaug Clinics  
& Hospitals

| Growth Lever 1                          | Strategic Imperatives   |
|---|---|
| <p><b>Rejuvenate Brand Ayurveda</b></p> | <p>A clear brand identity for ‘Ayurveda’ is ‘sine qua non’ or essential for building correct awareness, market acceptance, and to propel dynamic growth across it. As different sub-segments constitute the larger Ayurveda sector, and with a global spread of demand and supply of Ayurveda products and services spanning casual-leisure applications to some of the most rigorous healthcare provisions in hospital settings, backed by insurance/payors, misconceptions abound about the true nature and scope of Ayurveda. Furthermore, Ayurveda despite being described as a sort of mother system of medicine of the world with its origins in the Indian heartland, is yet in danger of being arrogated by other countries in the region. Also, as in the case of yoga, multiple Ayurveda variants may emerge across the world, diffusing and diluting the quintessential Indian identity of Ayurveda and the scope-quality of breakthrough healthcare that it offers to the people of the world.</p> <ul style="list-style-type: none"> <li>• <b>The Ayurveda brand should be systematically and scientifically studied by a team of experts</b> in the area (branding and domain) constituted by the Ministry of AYUSH, Government of India and experts from industry and academia leading to a clear articulation of brand dimensions, followed by laying out a strategic roadmap to achieving this.</li> <li>• <b>An Ayurveda brand development action plan should be centrally conceived</b> and regulated by the Ministry of AYUSH with appropriate participation by industry stakeholders. By consensus, industry stakeholders from industry, government, and NGO sectors will be urged to comply with the recommended brand communication guidelines.</li> <li>• <b>Geographical indication protection is to be obtained for Ayurveda</b> as originating from India. Furthermore, a team of legal experts should systematically evaluate copyright protection and intellectual property protection of Ayurvedic ideas and concepts.</li> <li>• <b>Setting up Ayurveda Chairs at country level</b> would help obtain MOUs from promising markets such as Malaysia, Trinidad and Tobago, Hungary, and the United States, thus promoting Indian herbal medicines in foreign countries through exhibitions and trade fairs, exchange of scholars, funding research, and providing technical support to universities.</li> <li>• <b>Conforming to International Drug Regulatory requirements and standards</b> to ensure strict uniformity in composition, appearance, taste and action for all Ayurveda drugs. Upgrading Indian Pharmacopeia towards keeping the global regulators informed to streamline the market access process.</li> <li>• <b>Accreditation of Ayurveda courses</b> conducted by foreign institutions to enable correct dissemination of the science across countries and to prevent progressive dilution-degradation of Ayurveda.</li> </ul> |

“Medical tourism in Ayurveda is an outcome of positioning Ayurveda as a science of healing.”

- Dr. Partap Chauhan,  
Director, Jiva Ayurveda

“Kerala has promoted Ayurveda in medical tourism as an experience and a well-being concept. We need to replicate that across India, especially across the coastal states of Goa, Tamil Nadu, and hilly states, where there is a major influx of tourists.”

- Arjun Sharma,  
Chairman of  
Select Group

“Propagating Ayurveda as a curative and preventive system of medicine with a scientific basis, in addition to its well accepted promotive health aspects, would bring about a positive change in the mind set of people and help expand Ayurveda and its holistic benefits not just in India but across International borders.”

Mr. Jose Dominic,  
Chief Executive Officer,  
CGH Earth

| Growth Level 2                                      | Strategic Imperatives   |
|---|---|
| <p><b>Revitalize Clinical Evidence Building</b></p> | <p>Evidence-based research shall support the establishment of safety and efficacy of Ayurveda products and services both in the domestic as well as the export market. This has been a challenge for many years now. However, the solution lies in evidence building that is consistent with the intrinsic character of Ayurveda and yet meets stringent scientific process expectations. Increasingly, with NABH-accredited Ayurveda hospitals and clinics abounding, the thorough documentation of process, safety, and health outcomes of Ayurveda healthcare is becoming a reality. Merely following western/external imposed frameworks could lead to the state of limbo persisting. Clinical evidence even at the level of observational studies, black-box studies, and importantly treat to target studies should be scaled up in sample size and number of studies.</p> <ul style="list-style-type: none"> <li>• <b>Strengthen National Ayurveda clinical database</b> thereby enabling a cohesive pull/push of innovative research methodologies to generate evidence applicable for Ayurveda concepts and research</li> <li>• <b>Standardize treatment protocols</b> by means of documentation of clinical practices throughout all Ayurveda hospitals and clinics and by systematic data collection and compilation</li> <li>• <b>Focus on research to establish safety and efficacy of Ayurveda Chikitsa</b> (health management comprising personalized diet-lifestyle-medicine- treatments) and not just a discrete/single component of the total Ayurveda intervention, to make it the treatment of choice for select diseases</li> <li>• <b>Practice-based Research Networks</b> of Ayurveda physicians adopting standardized diagnostic processes and medical management protocols for focus conditions leading to the generation of large amounts of standardized clinical data</li> </ul> <p><b>Documentation of scientific evidence</b> to support efficacy, safety profiles to drive market authorization in the United States and Europe</p> <ul style="list-style-type: none"> <li>• <b>Focus on 3 diseases on a mission basis and building robust evidence of safety and health outcomes</b></li> <li>• <b>Digital-Cloud-Mobile technologies</b> to be leveraged for recording and storing Ayurveda clinical data generated across dispersed geographies</li> <li>• <b>International conformance</b> with international drug regulatory requirements to ensure strict uniformity in composition, appearance, taste and action for all Ayurveda drugs</li> <li>• <b>Supporting Clinical Trials (RCTs)</b> for demand generation on well-studied and promising Indian medicinal plants like Withania somnifera, Andrographis, Ocimum, Emblica, Trigonella</li> <li>• Support preparation of <b>comprehensive safety reviews to achieve self-affirmed GRAS status</b> – this should include Phase 1 clinical studies in healthy volunteers and any missing animal toxicity studies on non-proprietary herbal preparations/products.</li> </ul> |

“The western research methods for traditional medicine cannot be blindly copied for Ayurveda research as the principles and goals of therapy are different. So, research methods have to be modified to fit into Ayurveda concepts and principles.”

- Dr. Eknath Naik, M.D., Ph.D., FACP, Assistant Director and Staff Physician, Emergency Department, James A Haley Veterans Hospital



| Growth Lever 3                | Strategic Imperatives   |
|-------------------------------|---|
| <p><b>Embrace Digital</b></p> | <p>India is emerging as a global leader in IT and digital transformation. Our nation’s prowess can be uniquely leveraged to enable the Ayurveda sector to leapfrog, to scale exponentially to achieve its true potential— this is not an option but an imperative, as without Ayurveda playing a larger role India’s public health, the industry’s needs will not be met.</p> <p>India is one of the largest smartphone markets in the world and approximately one-third of the population is connected digitally. This connectivity can be leveraged to create the awareness and effectively respond to demand for Ayurveda products and services.</p> <ul style="list-style-type: none"> <li>• <b>AyurTeleMed:</b> Telemedicine (over smartphones/laptops/mobile health vans) will enable to extend quality Ayurveda clinical expertise to Tier 2 and 3 cities, in addition to rural areas, and address the burgeoning demand for chronic diseases/non-communicable disease care across the country. This can be a breakthrough initiative from the Government of India and generate considerable employment for Ayurveda doctors.</li> <li>• <b>AyurClinCloud:</b> Develop a cloud-based large-scale clinical information system that can host lakhs of Ayurveda clinical services providers across government and private sectors.</li> <li>• <b>AyurNET:</b> Leverage digital technologies across the value chain of Ayurveda products and services from farms/forests to factory, and from factory to store and then to hospitals to home to enhance quality and efficiency for benefit of all stakeholders.</li> <li>• <b>E-commerce</b> is the future of Digital India. Adoption of mobile technologies provides “product manufacturers” a massive platform to operate “GloRural.”</li> <li>• <b>Big Data Analytics</b> will play a crucial role in the transition to “high-value innovative (bio prospecting) products” and support decision making to choose “combination therapy” (Allopathic medicine + Ayurveda).</li> </ul> |

“We need to promote telemedicine initiatives to bring Ayurveda consultation and Ayurveda products to citizens through collaboration with rural CSC networks and Anganwadis.”

- Dr. P.M. Varier, Chief Superintendent & Additional Chief Physician, Arya Vaidya Sala





Confederation of Indian Industry

## CONFEDERATION OF INDIAN INDUSTRY

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has over 8,500 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 200,000 enterprises from around 250 national and regional sectoral industry bodies.

CII charts change by working closely with the government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programs. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

The CII theme for 2017-18, "**India Together: Inclusive. Ahead. Responsible**" emphasizes the industry's role in partnering the government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development and training; affirmative action; women parity; new models of development; sustainability; corporate social responsibility, governance and transparency.

With 67 offices, including 9 Centers of Excellence, in India, and 11 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Iran, Singapore, South Africa, the United Kingdom, and the United States of America, as well as institutional partnerships with 344 counterpart organizations in 129 countries, CII serves as a reference point for the Indian industry and the international business community.

### Confederation of Indian Industry

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