



**Applied Research
in
Pakistani Environment:
*The Qarshi Approach***



An Aerial View of Qarshi Factory in Hattar, N.W.F.P



Business

1968

Qarshi Dawakhana

1988

**Qarshi Industries
(Pvt.) Ltd.**

2004

**National Leadership
in our field**

VISION 2020

***Regional Leadership
in our field***

Research

1971

R & D Dept.

2003

**Qarshi Research Int'l
(Pvt.) Ltd.**

2004

**First Lab. in Pakistan
ISO-17025
NA & PNAC**

VISION 2020

Int'l Linkages

Welfare

1973

Public Service Dept.

1994

**Qarshi Foundation
(Trust)**

2004

**First PCP Certified
NPO**

VISION 2020

Regional Presence



Pillars of Growth: Vision 2020



Human Resource	R&D	Systems	Public Services
<p><u>Advisors:</u> Ph.D: 06</p> <p><u>Management:</u> Ph.D: 08 Postgrad: 127</p>	<ul style="list-style-type: none">• Research Based Innovative Products• Patents (2 in Process)• Int'l Testing Services	<ul style="list-style-type: none">• ISO 9001• ISO 14001• HACCP• ISO 17025 (Norway)• ISO17025 (PNAC)• Organic Certification• OHSAS 18001 (Under Progress)	<ul style="list-style-type: none">• Health• Education• Environment• Heritage Conservation• Social Welfare

QJJ



QARSHI JOHAR JOSHANDA INSTANT HERBAL TEA FOR COUGH, COLD & FLU



For Sustainable Growth

Quality Assurance

Market Research

Product Innovation

Value Addition
Successful Products < 10%

Marketing

Production

Test Marketing

Ideas Screening

Synopsis
Literature Search

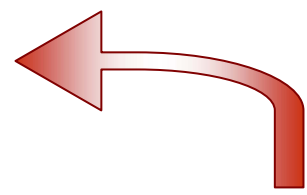
Research & Development

Pilot Production



Sugar Free

Economy Pack





Area of National Strength
(Local knowledge and its use)



Organically Grown Herbs





Qarshi Product Development Cycle



Research for Gold Standard **Raw Materials**

Gold Standard Raw Materials



Contract Cultivation & Sustainable Harvesting

Gold Standard Plant Source



- Organically Grown
- DNA Fingerprinted
- Standardized Constituents



Pilot Cultivation



Controlled Growth



Test Plantation

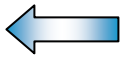


Qarshi Product Development Cycle



Research for Gold Standard **Products**

Marketing



Value Added Product

Gold Standard Raw Materials



- Synergized Action
- Full Spectrum Assured
- Batch to Batch Consistency
- Extraction in Pure Water
- Quality Assurance
- Sustainable use of Med. Plants
- Community Participation



Pilot Production



Test Marketing



Commercial Production





Qarshi Product Development Cycle

Result of Applied Research on QJJ



- a) **>80% of the total Market Share**
- b) **Profitability Enhancement**
- c) **High Brand Equity**
- d) **Corporate Image Building**



Linkages between Academia, Research & Industry

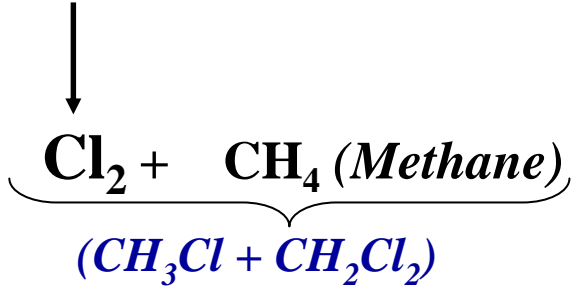


Need Based Applied Research Vision 2020



Chlorinated Sludge

(from NaOH Plant)



Rice Husk

(from Rice mills)

↓
Pure Silicon

Molasses

(from Sugar Industry)

↓
Motor Fuel

Esters

Food Supplement

Alcohols (CH_3OH)

↓
SILOXANES (CH_3SiCl_3)

↓
Silicon Cells

↓
Silicon Rubber

↓
Silicon Grease
(which works at
 100°C to -40°C)

↓
Resins
(Adhesive)

↓
Space Technology

↓
Antifoaming Agent

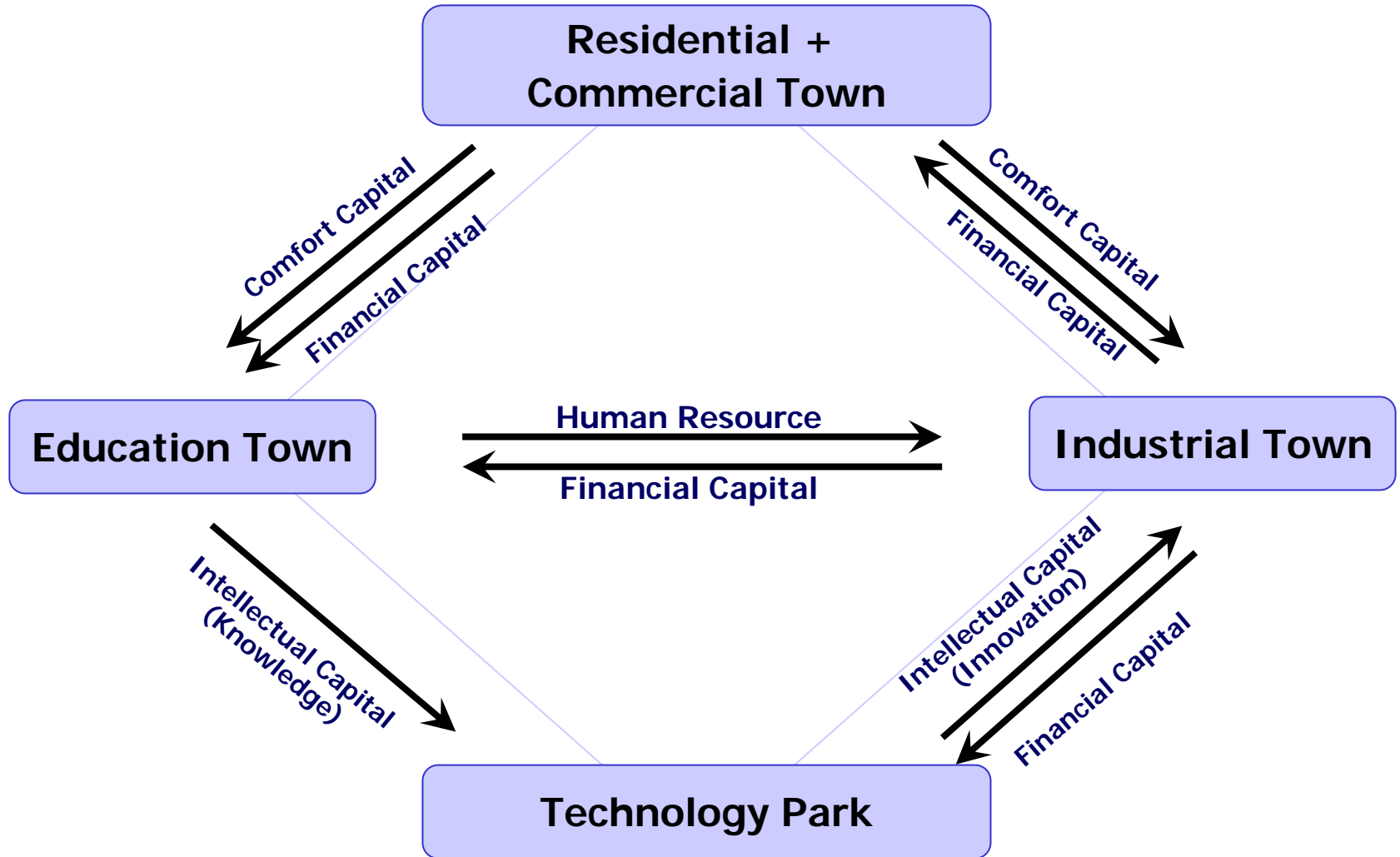


Building Sustainable Research Institutions

Linkages between Academia, Research & Industry



Vision 2120

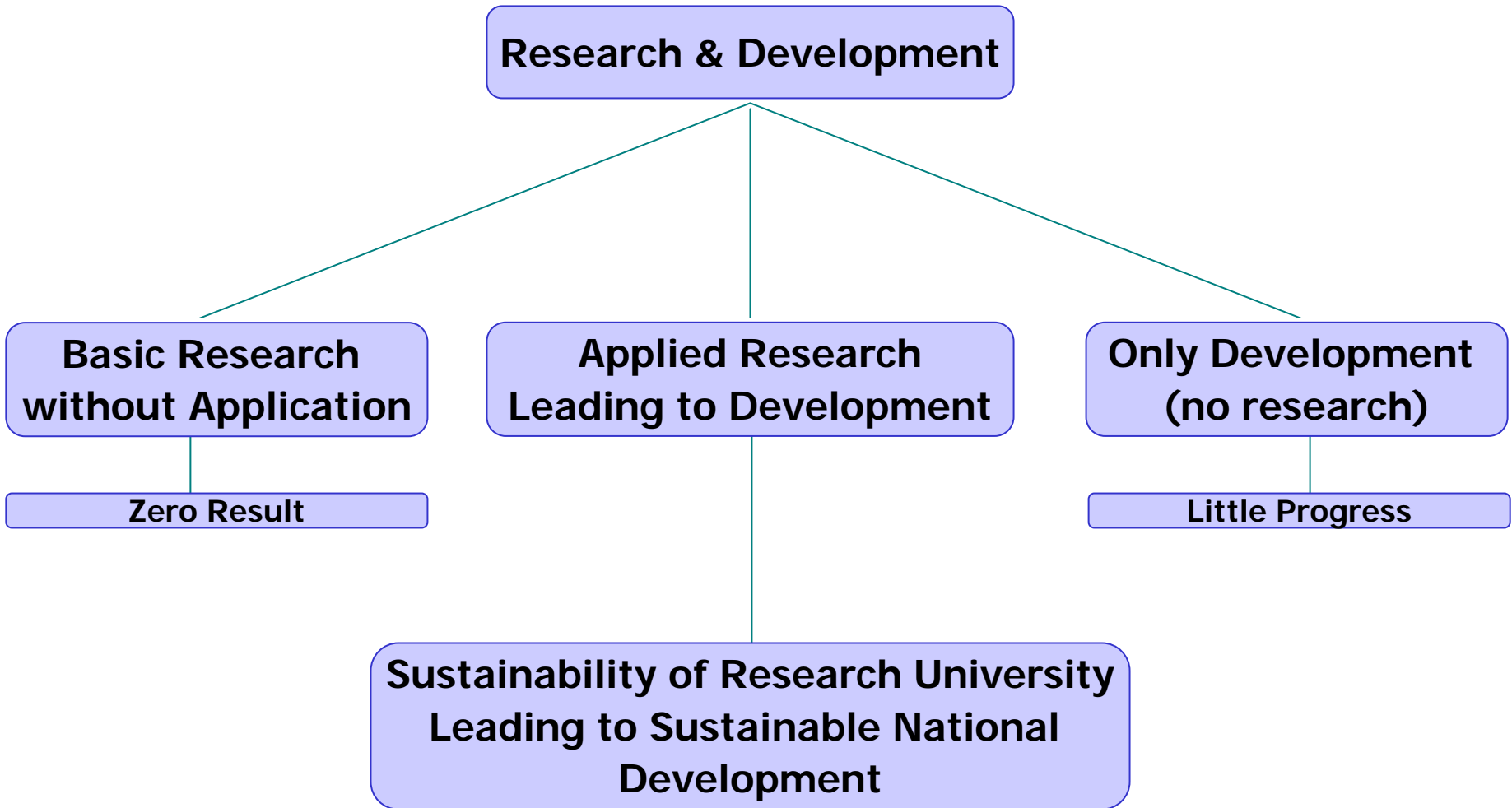




- 1. Information Technology**
- 2. Nano-Technology**
- 3. Biotechnology**



The way forward





THANK YOU !





Challenges for Establishing Sustainable Research Institutions



- **Major gap between research needed and research produced hence the importance of setting up a research universities**
- **Setting up of solid, sound scientific discipline for production of quality HR, innovative knowledge – both basic and applied**
- **Production of high quality scientists**
- **Production of knowledge and its access to the industry at cost effective rates for enhanced industry comparativeness**
- **Close collaboration between research institutions and industry for joint research so that the research has utility for the industry**