

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah, Most Gracious, Most Merciful.

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Dr. Arshad Ali

President's Pride of Performance Award
Sitara-e-Imtiaz (Star of Distinction) Award

Center of Excellence in compressed Air



A project of Potohar Center of Entrepreneurship Development

- Custodians of the **values** of the society?
- Develop and nurture talent and **knowledge** needed for the social and economic development
- Important to engage effectively with the stakeholders
- Innovation and Entrepreneurship

- Community and society
- Industry – **Most Important**
- Government
- Alumni (also part of community and industry)

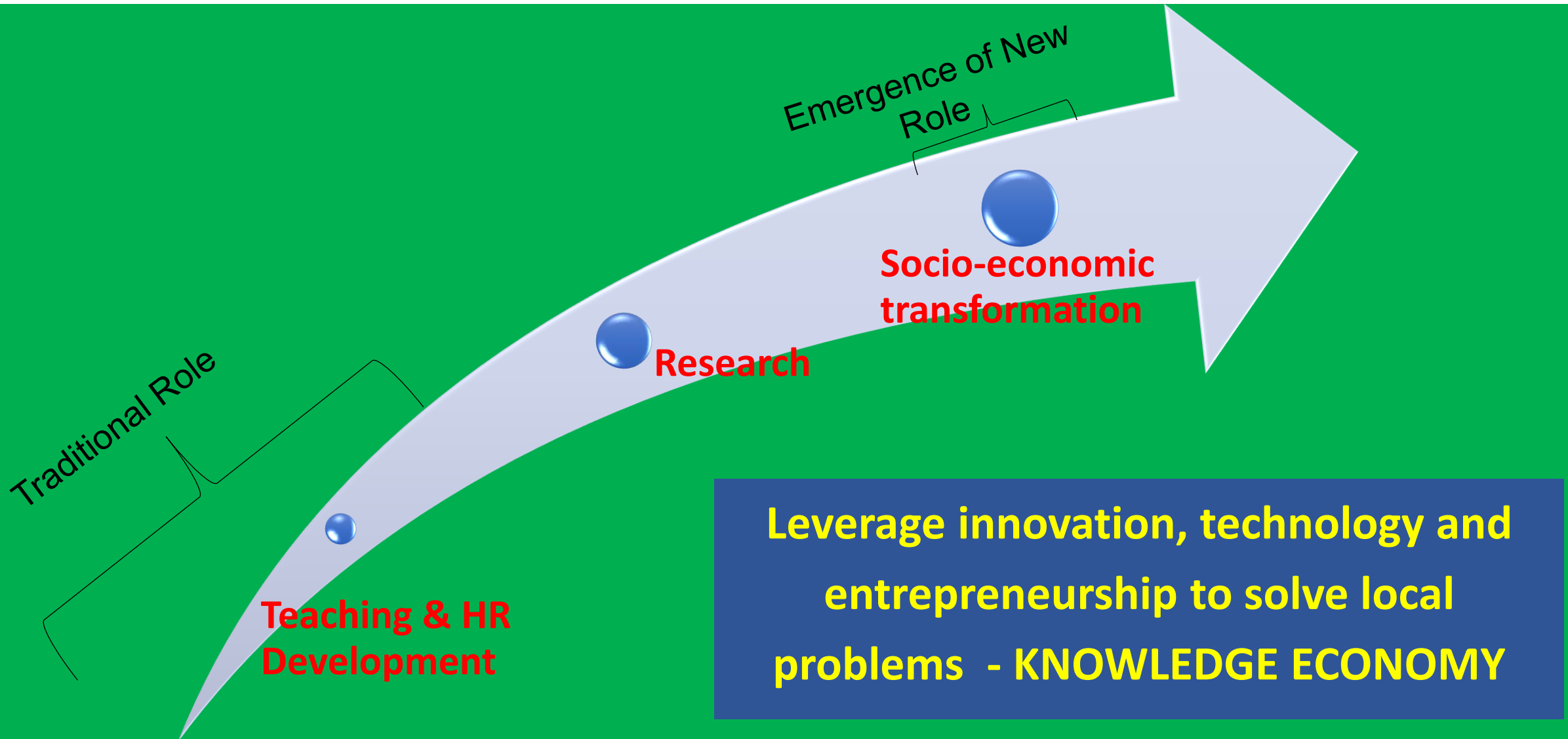
Changing Business Landscape

Largest Global companies in 2018 vs 2008

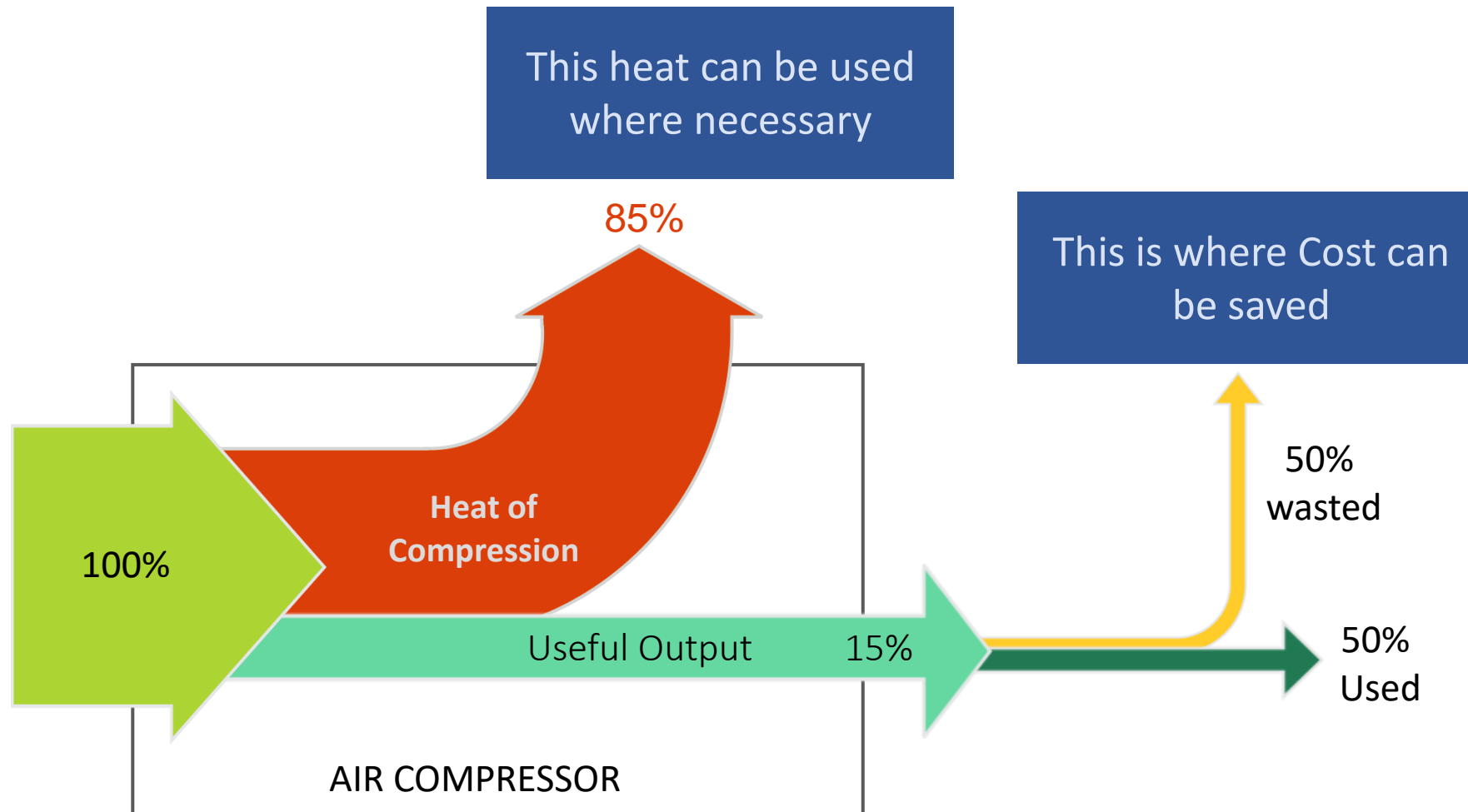
2018				2008			
Rank	Company	Founded	USbn	Rank	Company	Founded	USbn
1.	Apple	1976	890	1.	PetroChina	1999	728
2.	Google	1998	768	2.	Exxon	1870	492
3.	Microsoft	1975	680	3.	General Electric	1892	358
4.	Amazon	1994	592	4.	China Mobile	1997	344
5.	Facebook	2004	545	5.	ICBC (China)	1984	336
6.	Tencent (China)	1998	526	6.	Gazprom(Russia)	1989	332
7.	Berkshire	1955	496	7.	Microsoft	1975	313
8.	Alibaba (China)	1999	488	8.	Royal Dutch Shell	1907	266
9.	J&J	1886	380	9.	Sinopec (China)	2000	257
10.	JP Morgan	1871	375	10.	AT&T	1885	238

Source: Bloomberg, Google

Role of Universities in 21st Century





One of Industry Major Problem



Compressed Air is almost 8 times higher cost than electricity

Yarn Balance Sheet

Product	Supply Side	Transportation	Demand Side	Actions
	<p>Factory Floor</p> <p>→ 10,000 ton produced</p> <p>→ Cost/kg: Known</p>	<p>Transfer Medium</p> <ul style="list-style-type: none">• Mis-management• Theft• Delay	<p>Inventory</p> <p>→ 9,000 ton received</p> <p>→ 1,000 ton lost</p> <p>→ PKR Loss: Known</p>	

Compressed Air Balance Sheet

Product

Supply
Side

Transportation
Least Understood

Demand
Side

Actions



Compressor Room

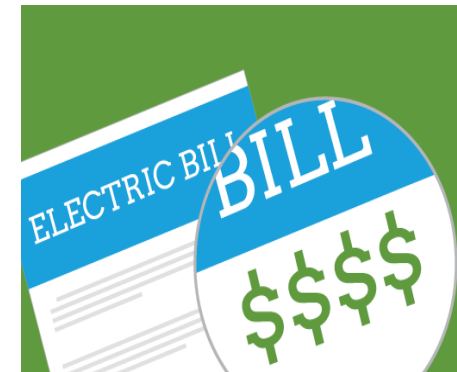
- 500+ kW capacity
- Production Cost:
Un-Known ?

Piping System

Very little Understanding ?

Air Jet Loom

- Pressure Loss
- PKR Loss:
Un-Known ?



AirAudit Saved **PKR 16.5 Millions** for



Reduced Compressed Air Leakages
PKR 4.77 Millions / Year



Eliminated Inappropriate Usage
PKR 11.73 Millions / Year



397,440 Kilowatts / Year of Energy Saved



Reduced 285 Metric Tons Emission of CO₂



Corporate Social Responsibility
Green House Emission Avoided by Recycling
96 Tons of Waste.

AirAudit Saved **Rs. 13.66 Millions** for



Reduced Compressed Air Leakages
PKR 9.87 Millions / Year



Eliminated Inappropriate Usage
PKR 3.79 Millions / Year



705,024 Kilowatts / Year of Energy Saved



Reduced 506 Metric Tons Emission of CO₂



Corporate Social Responsibility

Green House Emission Avoided by Recycling
170 Tons of Waste.

Case Study : Shafi Textile Lahore



AirAudit
www.airaudit.com.pk

ShafiTexcel

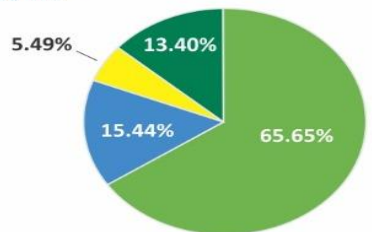
CASE STUDY

- Overview**
- ▶ **Client**
Shafi Texcel limited
 - ▶ **Location**
Lahore
 - ▶ **Application**
Rotary Screw Oil Lubricated Compressors for Shirts, Bed Sheets, Trousers and Sweaters etc.
 - ▶ **Products**
 - Shirts
 - Bed Sheets
 - Sweaters
 - Trousers etc.
 - ▶ **Customer Benefits**
 - Energy Savings
 - Reduced CO₂ Emission
 - Corporate Social Responsibility
 - System Optimization

AirAudit
Saved
PKR 11.76 Millions
for
Shafi Texcel Limited
Lahore

- Reduced Compressed Air Leakages
PKR 1.58 Millions / Year
- Eliminated Inappropriate Usage PKR 10.18 Millions / Year
- 143,424 Kilowatts / Year of Energy Saved
- Reduced 103 Metric Tons Emission of CO₂
- Corporate Social Responsibility**
Green House Emission Avoided By Recycling
35 Tons Of Waste.

ANNUAL SAVINGS
Rs. 11.76 Million



- A living example of university-industry partnership between **National Textile University (NTU)** and **Potohar Center for Entrepreneurship Development (PCED)**

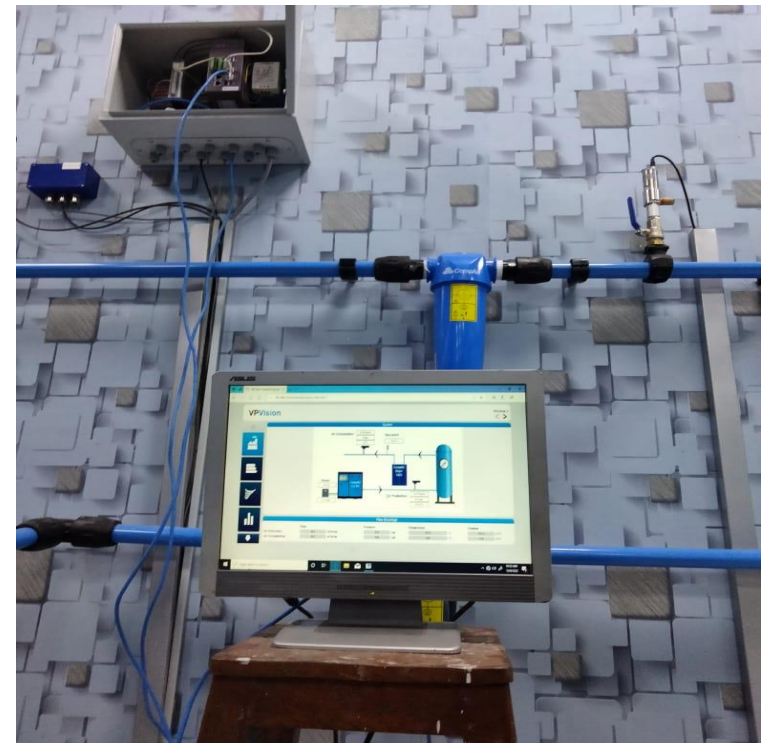


Unskilled workforce, or those with limited training and education, actually cost more in the form of low productivity, wastages and overall low performance of company. So, vision behind establishing CECA is:

Providing awareness and skills to connect *education* to *industry*

- Providing **competent HR** to Industry
- **Waste Reduction** in Industry
- **Industry competitiveness**
- Facilitation for **converting to pneumatic**

Automation



CECA will also provide a platform for research work for:

- Master Research
- PhD Research
- Industrial Research Projects



This Center of Excellence is equipped with following resources:

- Industry Standard **Compressor System**
- Latest equipment for **Remote Monitoring**
- Spacious **Training Hall**
- Specially Designed **Textbook for Compressor Air System**
- **Posters** highlighting important information
- **Compressor Internal Parts display for students**



- Compressed Air Systems Basic
- Compressed Air System Advance Courses
- Compressed Air (Waste, Management, Recovery)
- Monitoring and Management of Compressed Air and Industrial Gas Installations
- Compressed Air Quality in Food & Pharma Industry



- Compressed Air Auditing (Leaks)
- Operation and Maintenance of Vacuum & Blowers
- Compressed Air (Pollution)
- Service & Maintenance of Compressed Air Systems
- Compressor Room Layout Designing
- Industrial Air Quality Standards
- Transmission of Compressed Air



Sponsors for CECA



www.ntu.edu.pk



www.ingersollrand.com



www.parker.com



www.vpinstruments.com



www.pced.org.pk



www.compair.com



www.rastgar.com

- Plan to establishment more centers of expertise in Universities at:
 - Karachi – NED University
 - Lahore – University to be Identified
 - Sialkot – University to be Identified
 - KPK – University to be Identified
- Partners/Associates willing to join this effort are most welcomed to contribute their wisdom and material resources

Thank You