Institute of Advanced Manufacturing

Investment Opportunity – Higher Education

EDUCATION

استثمر في السعودية
INVEST SAUDI

Institute of Advanced Manufacturing

OPPORTUNITY DESCRIPTION: Invest in establishing an Institute of Advanced Manufacturing featuring Tech 4.0 Training Lab in collaboration with ROI-EFESO

RESEARCH AND DEVELOPMENT IN KSA

KSA's Targets for R&D and Innovation

By 2040

- 1st in MENA in the Global Innovation Index (Top 26 in the World)
- ~115B SAR — Annual RDI expenditure
- ~14K — Researchers employed in KSA

By 2050

- ~360K — High-tech. jobs created
- ~230B SAR — Direct GDP contribution of research

Benefits of R&D and Innovation in Manufacturing

- Enhanced output with an increase in value, quality and flexibility
- Efficient and effective responsive production with high asset utilisation
- Eco-friendly and sustainable manufacturing practices
- Mass customization and tailor-made product offerings

Key Initiatives for R&D and Innovation

هيئة تنمية البحث والتطوير والابتكار
Research Development and Innovation Authority

RDIA has developed a holistic strategy based on a mission-oriented approach that will drive the development of research, development and innovation ecosystem in KSA

Key Focus Areas for Research and Technology Development Funding

- Health and Wellness
- Sustainability and Essential Needs
- **Energy and Industry** (Focus Area for this Opportunity)
- Economies of the Future

Transform KSA's *industrial sector* towards high-value on-demand manufacturing

Project Level Funding	Salary and Visa Support	Transforming Education Ecosystem	Regulatory Benefits
Investment in specific *projects solving KSA's most* pressing problems via manufacturing technology	Attracting world-class talent globally and importing best practices to achieve global leadership in manufacturing and industry	Promoting innovation at an early age and enabling accelerated talent programs to encourage innovation thinking	Ensuring ease of operation by regulatory streamlining and introducing a national procurement initiative

Focus Area for this Opportunity

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OPPORTUNITY OVERVIEW

Advanced Manufacturing Overview

Advanced manufacturing (and Industry 4.0) integrates machinery with digital and cloud-based technologies and heavily relies on information, automation, computation, software, sensing and networking

- Big Data and AI analytics
- Cloud computing
- Industrial IoT
- Digital Twins

Industry 4.0

- Augmented Reality
- Cybersecurity
- Additive Manufacturing
- Autonomous robots

Horizontal and vertical integration

Advanced manufacturing institutes and hubs focus on research, degree programs and upskilling

Research Focus	Graduate Focus	Upskilling Focus
Focus on R&D to explore new technologies, methodologies, and innovations	Offers graduate-level education, including master's and doctoral degrees	Provides industry training and education to enhance skills of professionals

Growth Drivers and Landscape in KSA

Tailwinds in manufacturing are supported by KSA's plans to develop a strong industrial base

- Diversification to Non-Oil GDP ($240B[1] by 2030)
- Rising industrial exports ($148B[2] by 2030)
- Government's rising support for manufacturing

National Industrial Development and Logistics Program

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Research Development and Innovation Authority

Centers of advanced manufacturing in KSA have a strong research focus but few graduate offerings

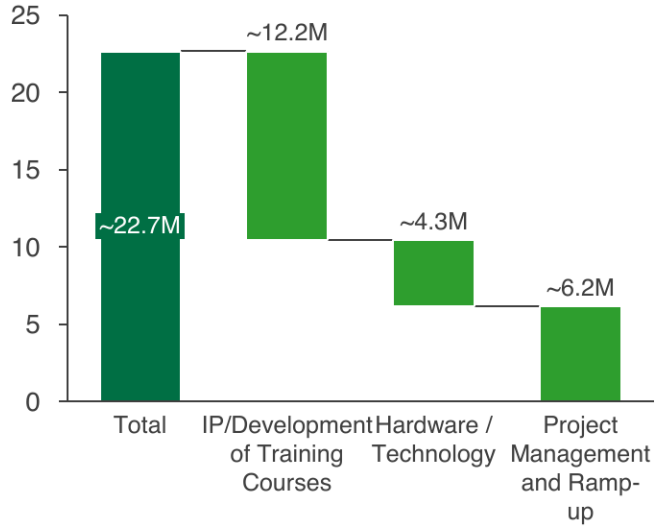
NOT EXHAUSTIVE

1. Advanced Manufacturing Institute: King Saud University
2. Centre of Advanced Manufacturing: Alfaisal University
3. C-O-E of Advanced Manufacturing: King Abdulaziz City of Science and Technology and University of Cambridge

Investment Outlay

CAPEX outlay of ~22.7M SAR is required to set up the proposed institute

Investment Requirement[6]
SAR Million



63 Classroom training courses

11+ Hours of digital training courses

Makerspace, Smart Learning Factory, Mobile Simulations and Implementation & Project Management Support

ased on the current level of researchers/ capita in top innovation economies; [6]ROI-EFESO, does not include operational cost like rent,

ntribution of Industrial sector: Arab News, [2]Standard Charter analysis, [4]UNESCO Institute for Statistics; [5]Global Innovation Index Report

Definitions

#	SCORECARD SECTION	DEFINITIONS
1	Market size	Size of market in value/volume in KSA and/or Region (MENA/GCC) covering future projections based on available estimates from published /government sources
2	Business drivers	A select number of factors that will influence future demand for the related product/service
3	Investment highlights	An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size
4	Value proposition	Summary of key differentiators that position KSA as a strategic choice over other regional/global peers
5	Market readiness	An overview of KSA market structure, market maturity and level of participation by local and global players
6	Global trends	Latest business developments within the sector/product category
7	Scalability and localization	Ease of scaling the business across the value chain or into new adjacent products or geographies that would maximize the opportunity's investment returns and the ability and potential to locally manufacture the product and its components
8	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
9	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
10	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
11	Enablers	Factors that enable investment in the underlying opportunity
12	Cost of doing business in KSA	Key factors that position KSA as a competitive destination for investment in the region. Productivity adjusted wages do not include cost of $1.23/hour towards annual recurring charges including work permit, resident identity (iqama) and health insurance

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