GLOBAL DISCOURS F

41R: Seizing Possibilities for The Future

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4IR: Transforming Production

Dr Hasan Shafi Partner A.T. Kearney

Transforming production

Key messages

- 1 Significant manufacturing value add (MVA) opportunity
- 2 Countries, with different starting points, must have clear aspirations
- 3 Policies need to be holistic, sustainable and enable collaboration
- Companies transform with clear North Star, taking small steps, moving fast
- 5 Future proof through capability building and life-long learning

5 key technologies in various stages of readiness



Analytics & Intelligence



Human-Machine_ interface

Digital – Physical transformation 🝘 🕒



Internet of Things

Connecting the unconnected

85%

Of production assets today are still unconnected

Number of IoT devices

31 bn

17 bn

2016

2020

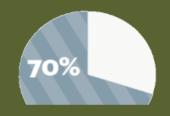
Artificial Intelligence Coming of age

\$32 bn

\$8 bn 2016

2020

70% of captured production data goes unused – Al can change that



Wearables

Digitizing the workforce

\$700 mn market. projected to grow to \$5 bn by 2020



Most industries still in early stages of adoption **Advanced Robotics Emerging from the** cage

\$38 bn market

250,000 units sold in 2015 – projected to grow to 400,000 units by 2020



10%

Handles 10% of production tasks today

Rising to 45% by 2030

3D Printing

Shaping the future one layer at a time

Global Market

\$16 bn

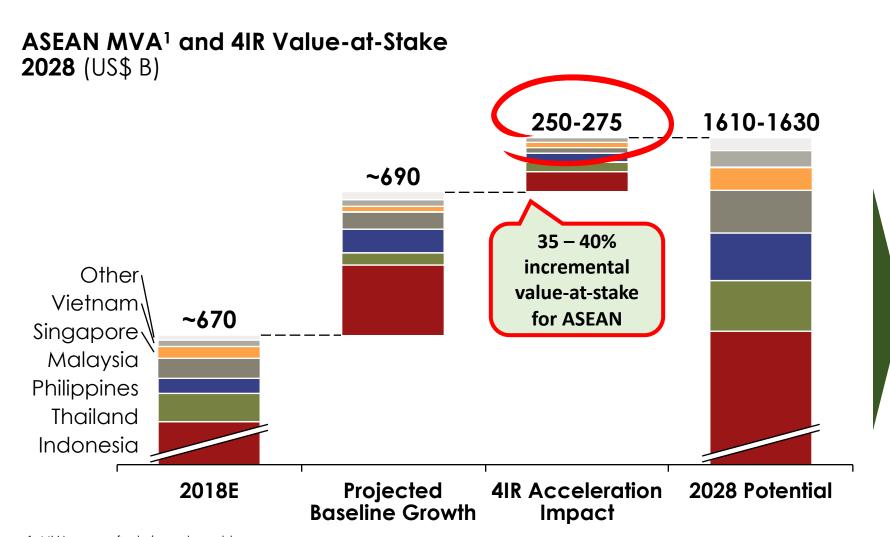
\$5 bn

2016

2020

Recent surge in metal capabilities

35 – 40% incremental MVA opportunity from 4IR





Implications for Bangladesh

Significant MVA potential for Bangladesh

- Robust GDP growth >7%
- >50% contributor for industries
- Double digit growth rates for industry, incl. manufacturing

However, country at nascent stage for 4IR readiness

^{1.} MVA = manufacturing value add Source: Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries, Industry 4.0 – Opportunities and Challenges of the Industrial Internet, S&P Capital IQ, Oxford Economics, UNIDO, UNDP, Bangladesh Bank, A.T. Kearney analysis

Will require leapfrogging from nascent readiness

WEF Country 4IR Readiness Framework

Production

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Drivers

Demand Environment

Technology & Innovation

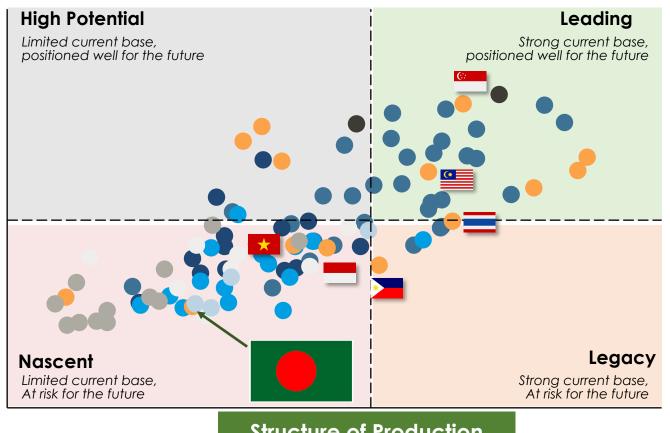
Institutional Framework

Global Trade & Investment

Sustainable Resources

Human

Capital



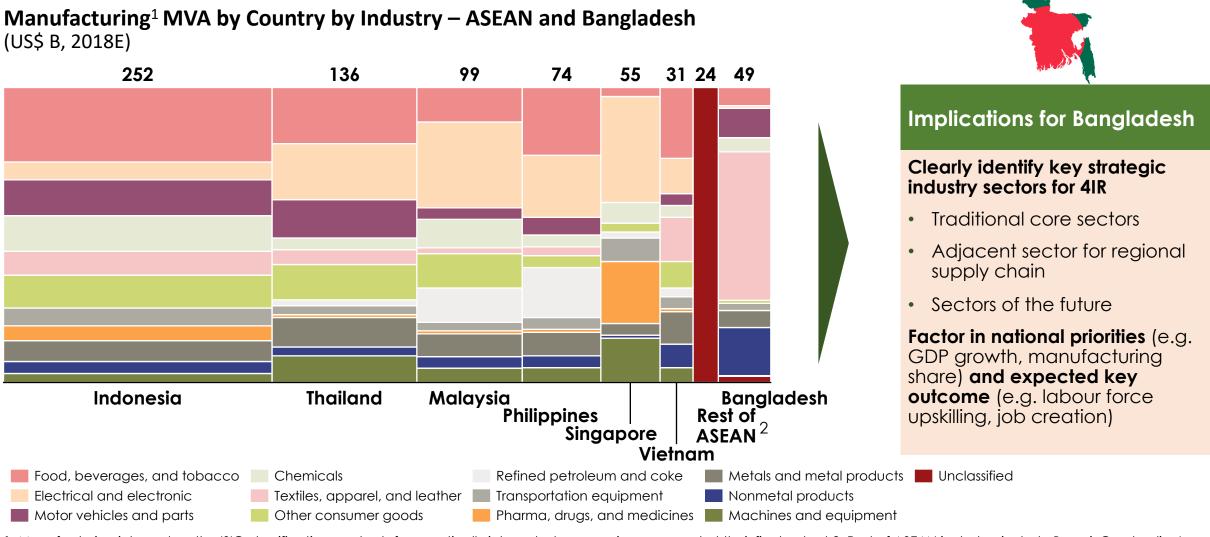
- Europe
- Middle East and North Africa
- Latin America and the Caribbean
- Eurasia
- East Asia and the Pacific
- South Asia
- Sub-Saharan Africa
- North America

Structure of Production

Scale

Complexity

Decide on the core and adjacent sectors



^{1.} Manufacturing is based on the ISIC classifications, outputs from vertically integrated companies measured at their final output 2. Rest of ASEAN includes: include Brunei, Cambodia, Lao and Myanmar
Sources: IHS Markit, UNIDO. A.T. Kearney Analysis

4IR case study: Indonesia country strategy



Aspiration

Aspiration

By 2030...

(Aspirational)

Aspiration "To become a global top 10 economy in 2030 by regaining net export advantage, driving share of GDP from manufacturing, and statement competing in productivity, as a result from advancement in 2030 technology and innovation" (2)(1)**Undisputed**

global leader elements

> Top 10 largest economy¹

Revive net export advantage

10% net export contribution to GDP

(3) APAC productivityto-cost champion

2x current² productivity -tocost

Inspiring the Manufacturing Tech Revolution



2% of R&D spending share to **GDP**

https://www.youtube.com/watch?v=HQ H974C5Ss

5 lessons are learnt from global policies

Lessons learnt for Bangladesh



- Policymakers should have a clear, actionable, targeted and impactful objective for 4IR strategy
- -e.g. UK aims to double the share of manufacturing in GDP
- Priority sectors and key technologies must be identified for effective resource allocation
- -e.g. Germany focusing on IoT and CPS; China10 focus sectors
- Initial state support and funding is needed to kickstart the adoption;
 however, complementary private investment is equally important
- A collaborative effort from policy makers, implementing agencies, corporates, technology leaders and research hubs is key for success
- Policy should also address negative implications of 4IR, for example, on SMEs and low skilled labor

Thank you