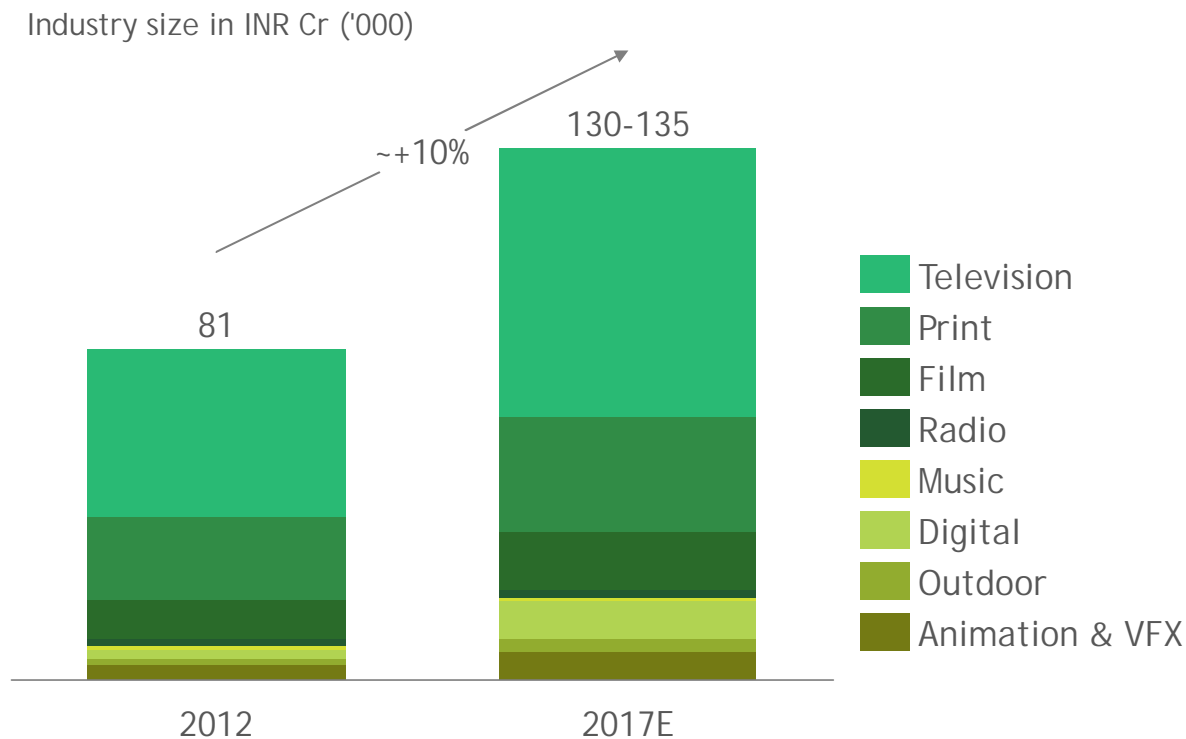


Indian M&E industry added ~50k Cr between 2011 and 2016 ...



While the sector has grown faster than ~10% over the last 5 years, demonetization and GST reforms have resulted in muted growth in 2016 and 2017.

These are short term implications, and the industry is likely to make a quick recovery

The industry directly employs over one million people



Source: Expert interviews, analyst reports, BCG analysis

Indian M&E has room to grow; contributes ~2-3% GDP in comparable economies

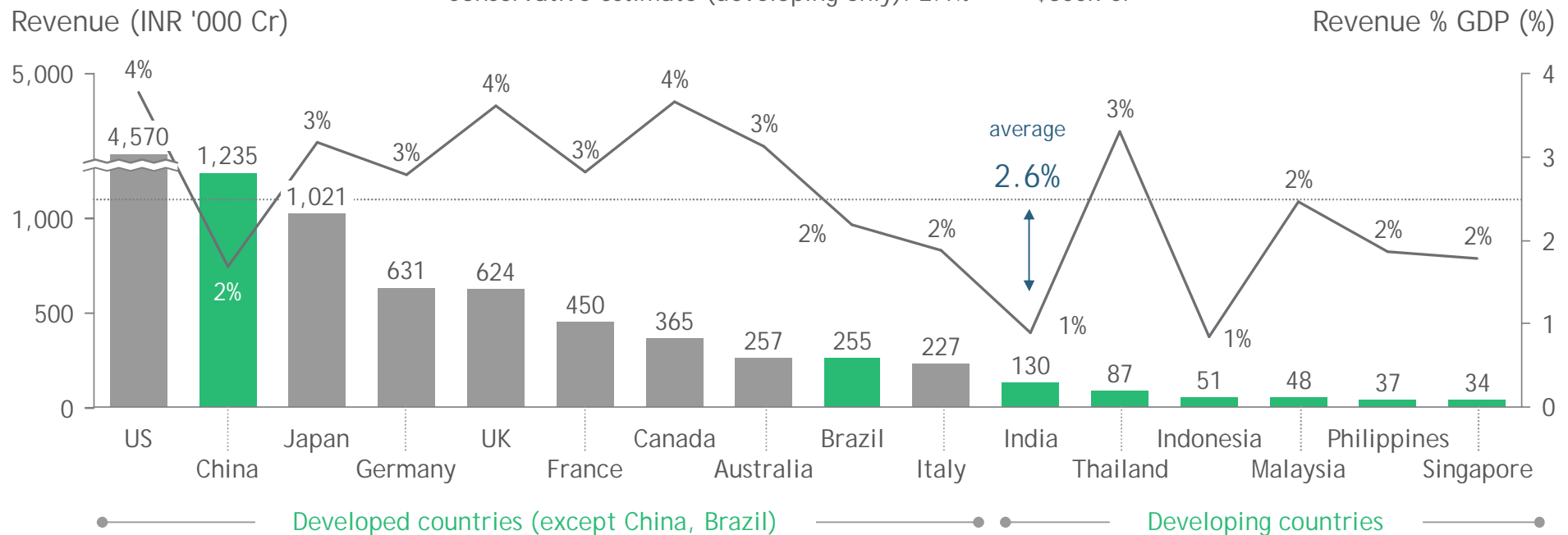
Market potential

Base case estimate : 2.6%

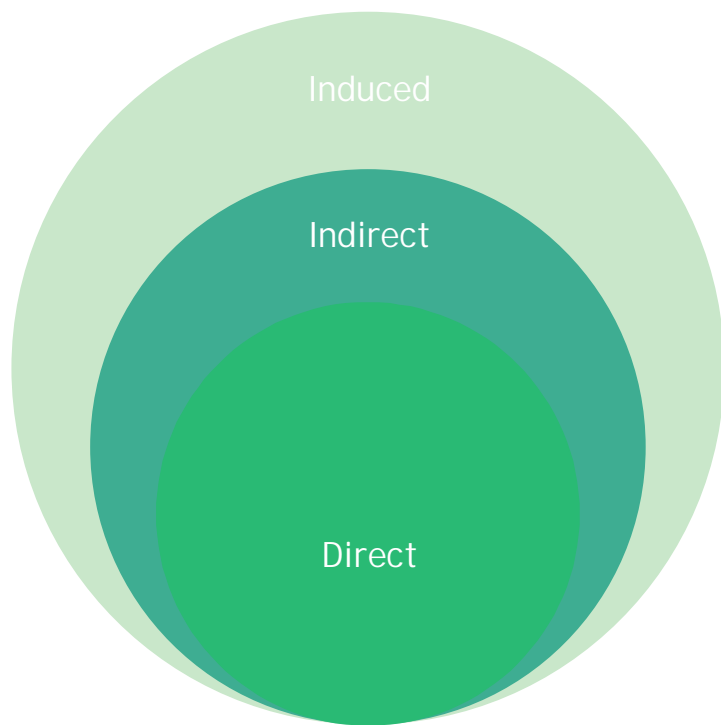
\$380k Cr

Conservative estimate (developing only): 2.1%

\$300k Cr



Economic impact of an industry goes far beyond just revenue earned



Induced impact

Influenced consumer spend such as tourism, consumer goods, retail

Indirect impact

Trickle-down growth in other industries due to media and production activities

Direct impact

Revenue from core media activities

How do we quantify this impact?

Type I multiplier

estimates direct + indirect impact

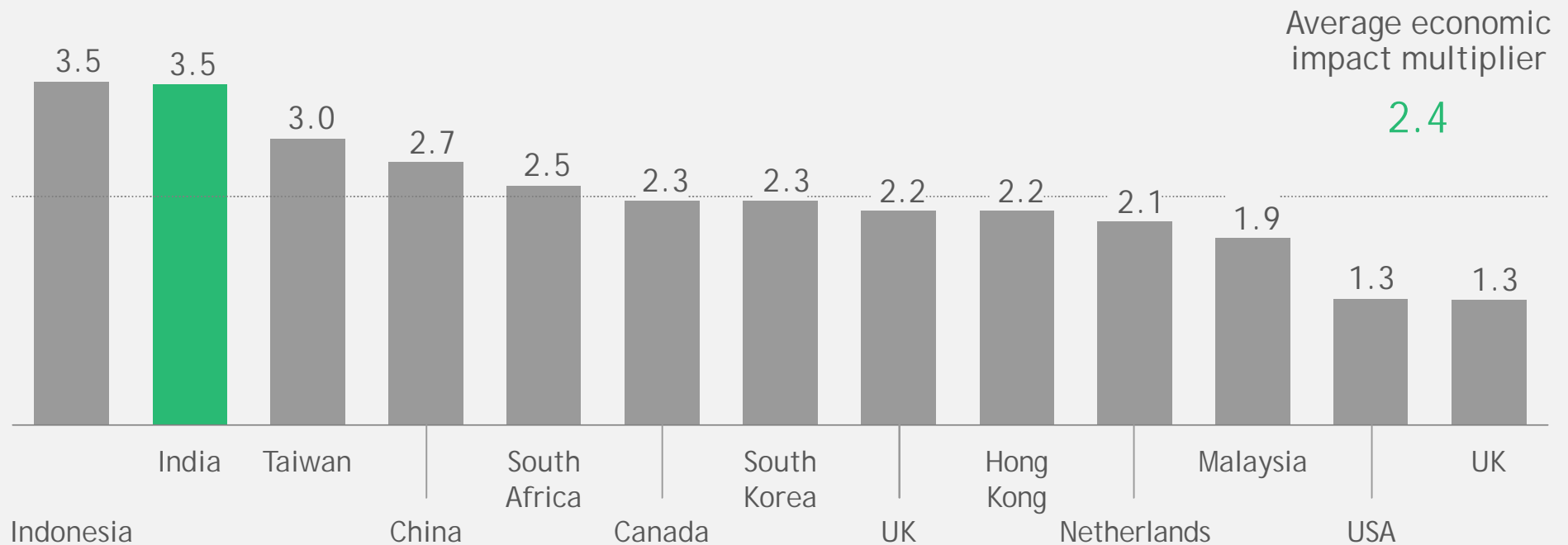
Type II multiplier

estimates direct + indirect + induced impact

ex: Total GDP impact =

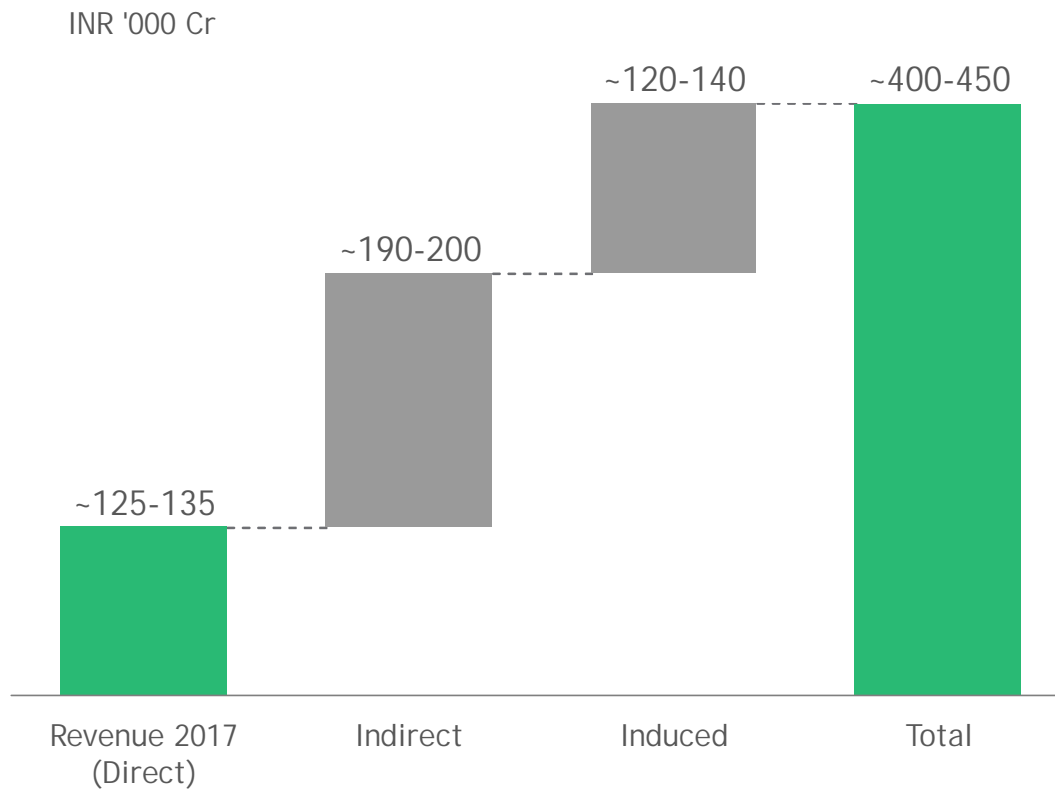
Type II revenue multiplier x revenue

Backup: Revenue impact multiplier for entertainment segments¹ across markets

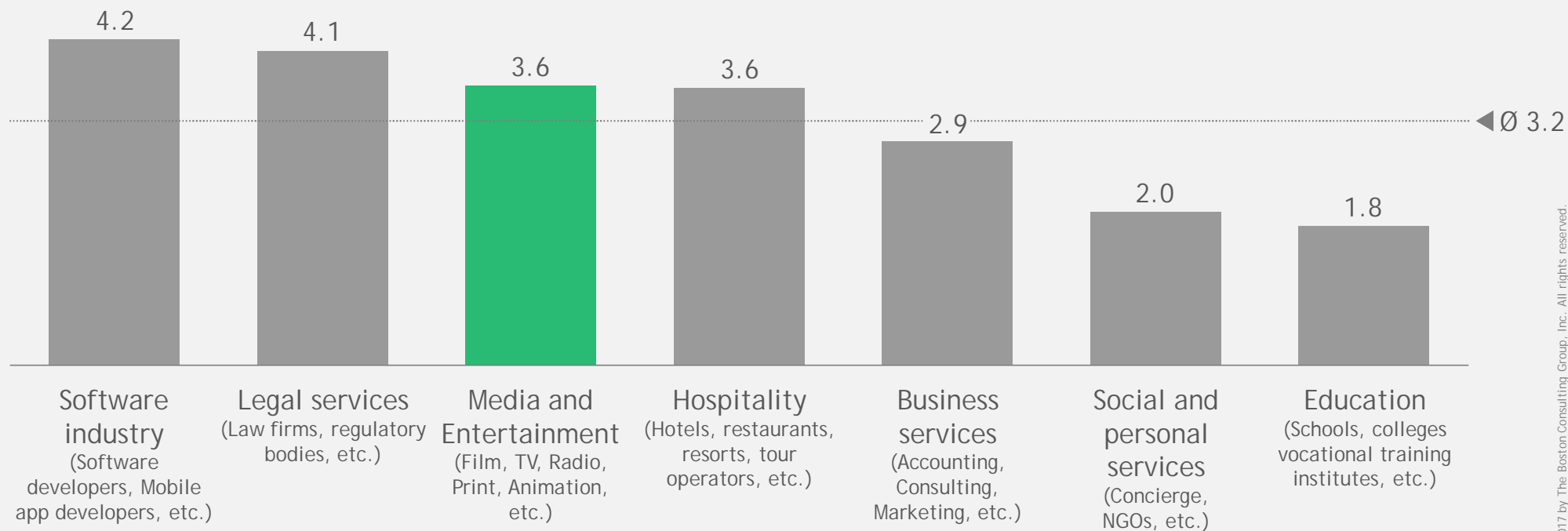


1. Across types of media: print, TV, film and music
Source: Oxford economics, Industry reports, BCG analysis

~450k Cr GDP originates from activity in M&E industry, 2.8% of GDP

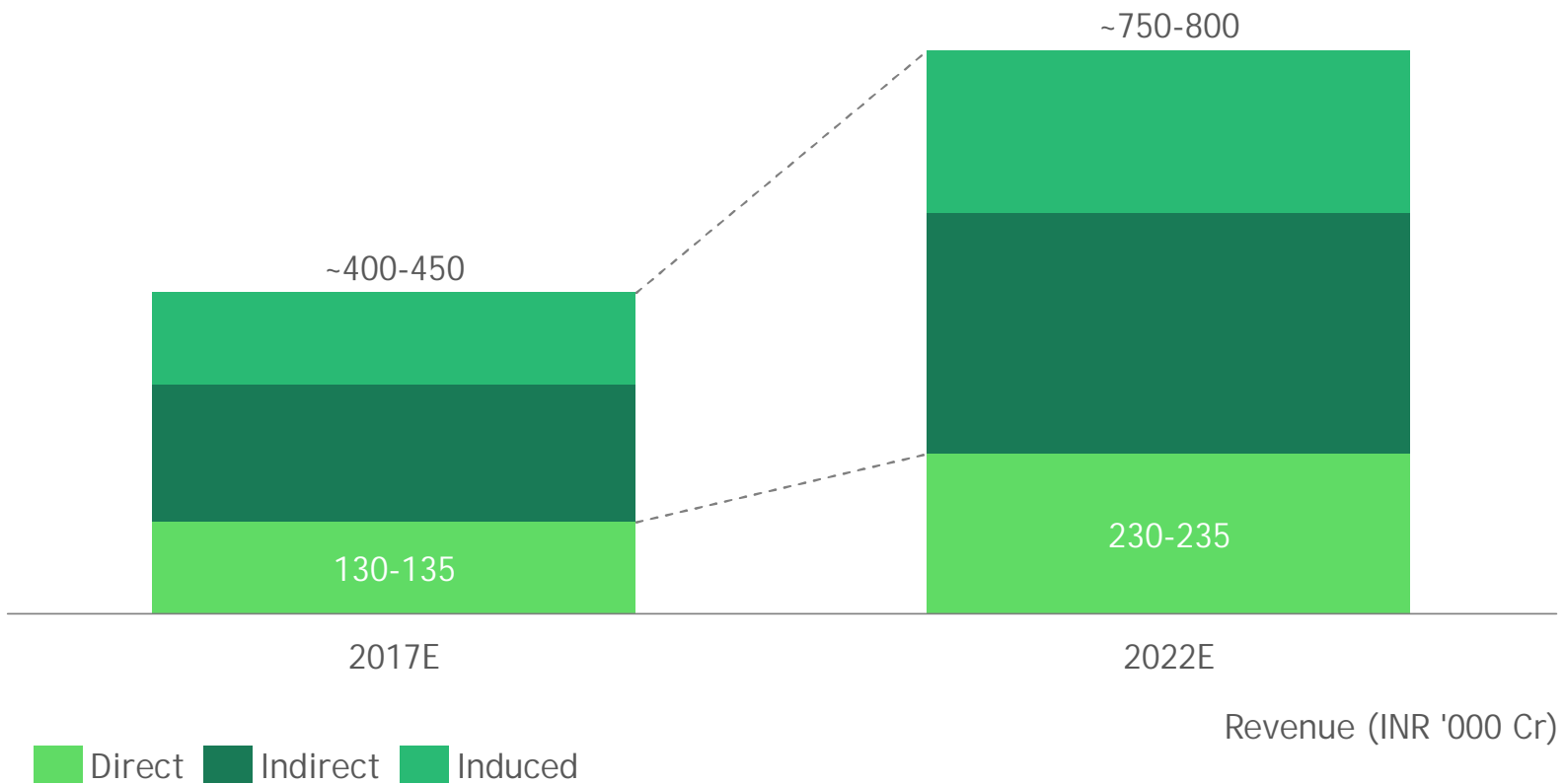


Backup: Employment impact multiplier across Indian service industries

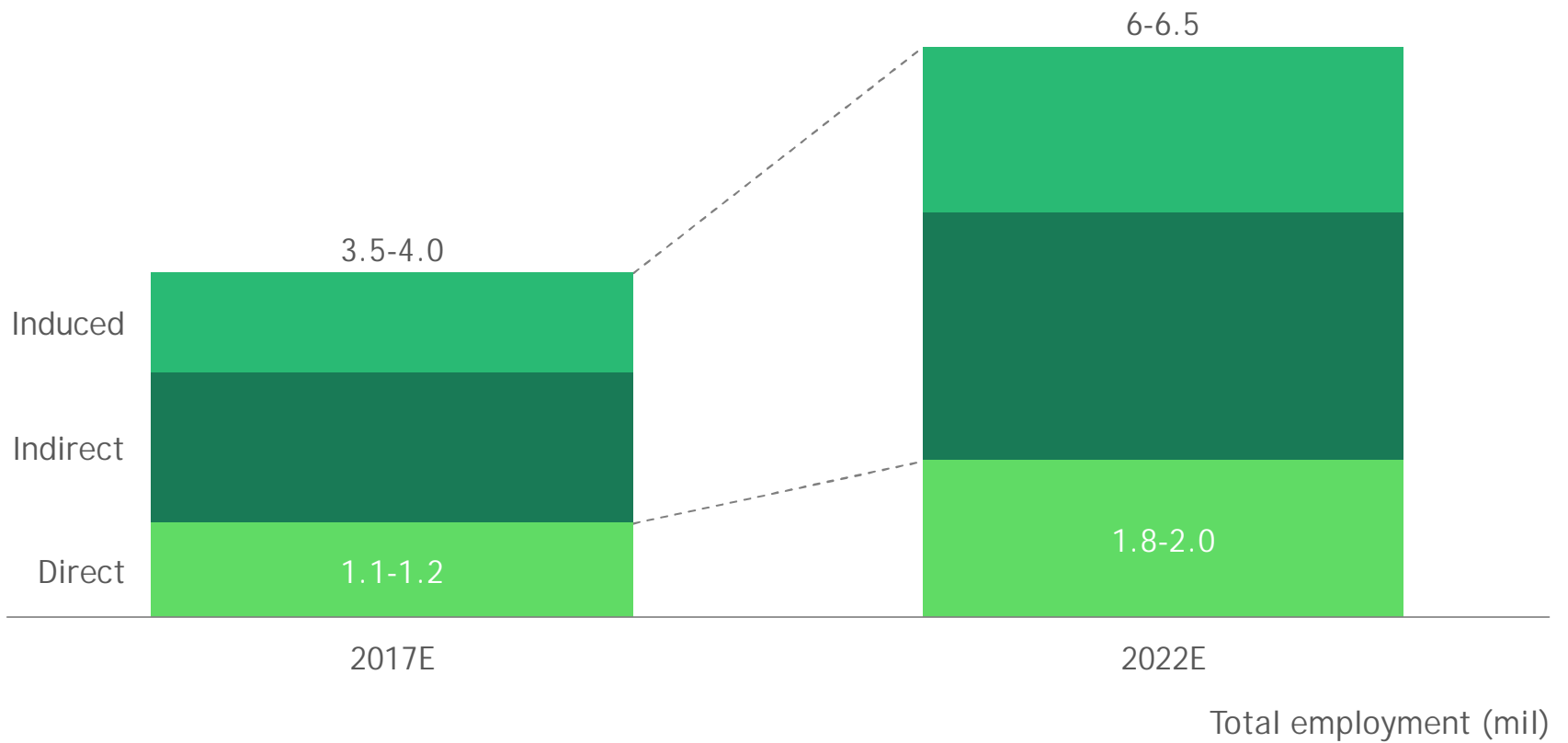


Source: Indian IO table (MOSPI), Expert inputs, BCG analysis

M&E expected to almost double by 2022, CAGR 11-12%



Direct employment almost doubling in 5 years, expected to add ~700-800K additional jobs



Three fundamental shifts that will transform the industry

Media value chain Trends	Content production	Aggregation & distribution	Monetization
Changing consumer demands	<ul style="list-style-type: none"> • Demand for niche content and new formats • Higher volume of content generated • Social influence in content sourcing / production 	<ul style="list-style-type: none"> • Super aggregators of OTTs for ease of navigation 	<ul style="list-style-type: none"> • Moving from mass eyeballs to monetization of micro-segmented audiences
New industry structures	<ul style="list-style-type: none"> • New production models - rapid cycle time at lower cost • Higher fragmentation in content generation / production ecosystem 	<ul style="list-style-type: none"> • Blurring roles across media players with value pools migrating • Rising privacy concerns 	<ul style="list-style-type: none"> • New subscription models emerging • Rise of programmatic and exchanges • Short form advertising
Digital disruptions	<ul style="list-style-type: none"> • Virtual Reality/ Augment reality content • Greater use of technology in content sourcing / production 	<ul style="list-style-type: none"> • Personalized curation • On-demand, device agnostic rendering of content 	<ul style="list-style-type: none"> • Additional monetization paths due to big data • Targeted advertising with return metrics

Talent of the future of Media Industry

Media value chain Trends

Many new roles envisioned

Changing consumer demands

- Social Engagement Manager
- Consumer Insight analysts
- Social media listeners
- UI/UX designers
- Sensor Architect

New industry structures

- Information Security Analyst
- UI/UX designer
- App developer
- Testing Engineer
- Digital Marketing

Digital, AI, Big data & technology disruptions

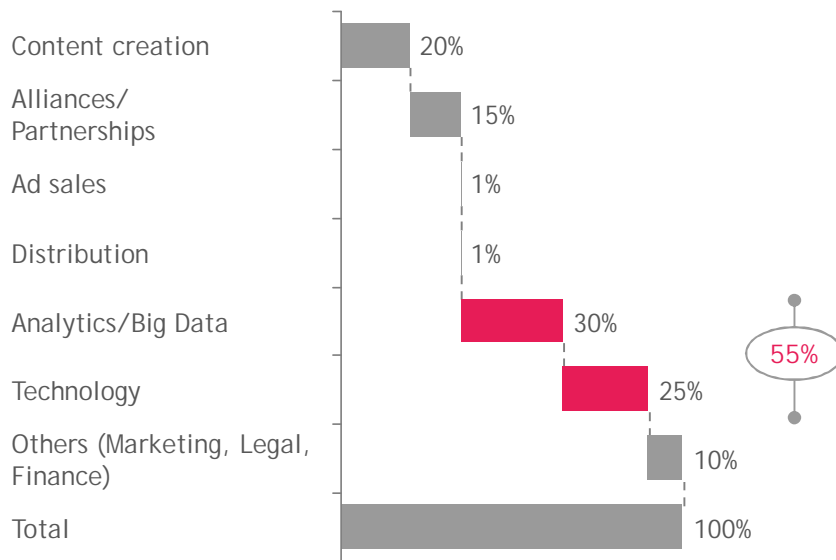
- VR Designer
- 3D Modelling engineer/ 3D Graphic Artist
- Data Architect
- Data Analyst
- Data Scientist
- Cloud software engineer

- Social, mobile
- On-demand, device agnostic rendering of content
- Privacy concerns
- New distribution channels
- Rise of programmatic and exchanges
- AR VR content development
- Big data and analytics
- Application of new technologies

New age media companies have 50-60% Tech & analytics jobs

Job roles

Job Family



Key tech & analytics job roles



Customer service - insights researcher

Convert customer feedback (through call centres) into business insights



Data scientist - experimentation

Focus on experimentation to continually improve product



Data scientist - algorithms engineer

Develop improvements to the core algorithms like recommendations



Senior UI/UX engineer

Architect, develop user experiences on TV & Web interfaces



Cloud engineer

Provide cloud solutions for content



Software engineer, testing

Test features of the product and assure quality

1. Job split calculated basis % of Job postings for each job family on job websites such as Indeed, LinkedIn in USA

Resourcing and Capability

Main shifts in job roles

Driver



In addition to sales capabilities, maximizing programmatic revenue requires analytic & tech skills



Specifically on sales capabilities: Buyers increasingly familiar with programmatic, requiring publisher agents to be "at least as knowledgeable" as their clients

- Demand for sales agents that are specialists
- Transitioning towards a sales consultancy model vs agents who gave traditional transaction support



Approach



Build capabilities within existing teams, through learning and development workshops

- Can leverage ad-tech partners to provide training

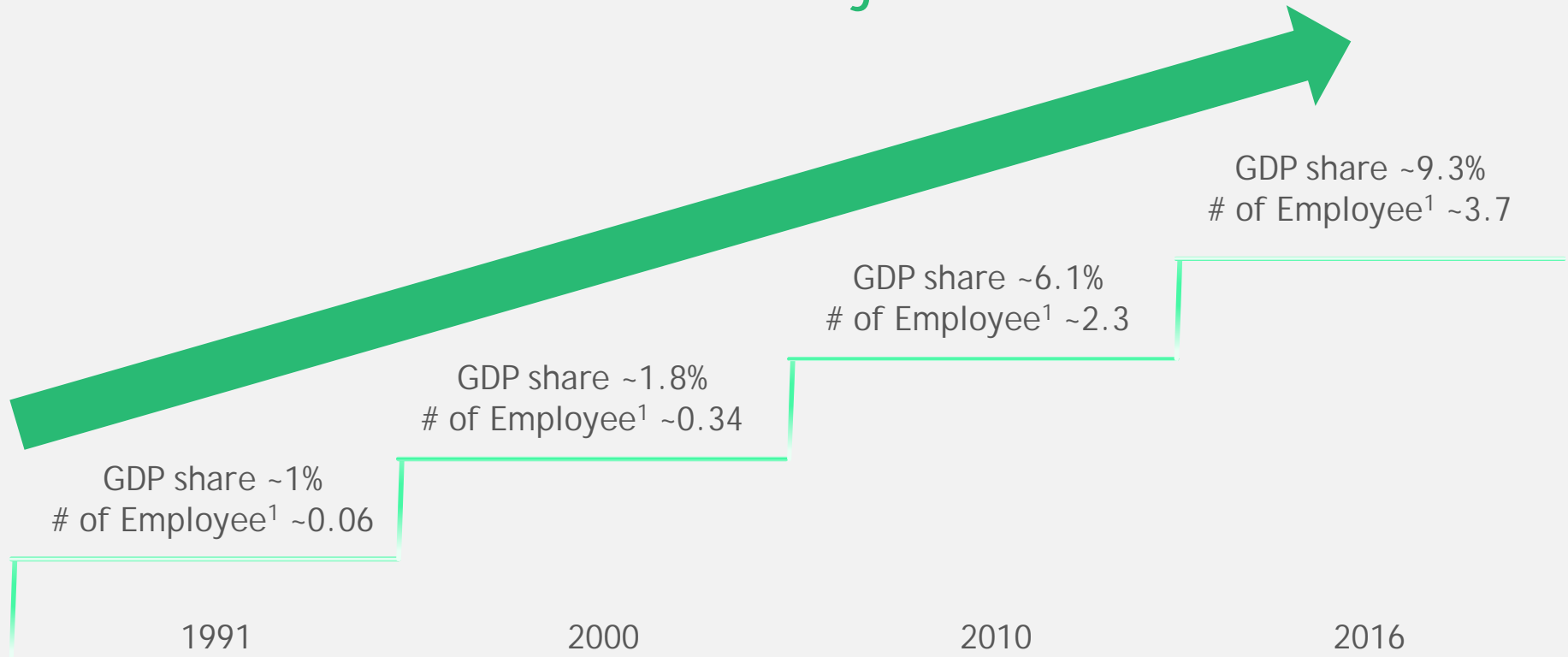


Hire in new talent to fill key specialist gaps

- E.g. Programmatic specialists/ operations agents to support general sales teams

Draft

IT -BPM industry has grown significantly over last ~25 years to become one of the major contributor to GDP



1. Employee numbers in million.
Source: NASSCOM

Initiatives by industry stakeholders to boost IT Talent



NASSCOM

Industry bodies

- IT - ITeS skill council to create quality at large scale and enhance employability
- Mentorship and skill dev. program for SMEs by industry bodies
- Industry focused skill development programs designed in liaison with industries by IEEE, NIIT etc.



Government of India

- Set up government aided specialized institutes for IT education viz. IIIT
- Customized training programs for faculties and students with NASSCOM viz. ICT -spread across 14 states impacting 3 lacs faculties and students
- Specialized programs in liaison with industry viz. proposed summer internship program, programs with Symantec for IT security professionals



Infosys



IT firms

- Continued professional development through technical and functional certifications such as PMP® and ITIL
- Investment in captive training centers
 - Infosys spends ~INR 2.5 L per new graduate in training costs
 - TCS training employees in AI and SMAC technologies