

Are you an Opportunist or a Victim?

Outlining the Role of AI in Broadcast

Doug Clark

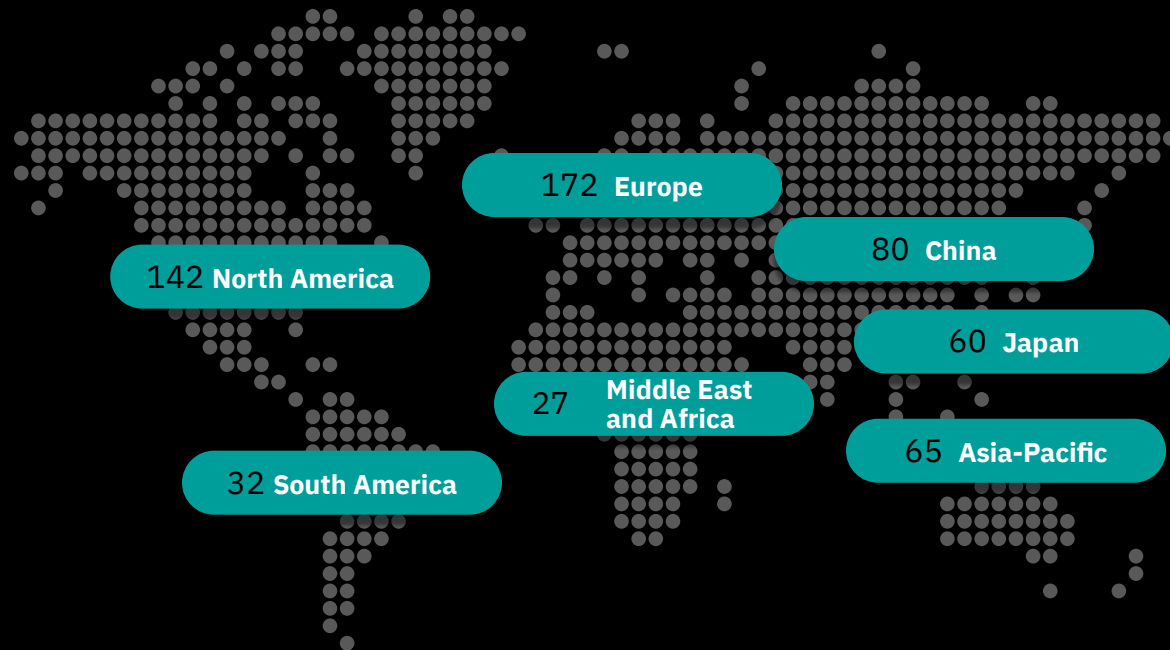
IBM WW, Media/Entertainment Cloud and Cognitive

Copenhagen, 16 May 2018

@cloudstuff

578

2017 Global C-suite Study Media and Entertainment (M&E) respondents



Cluster analysis revealed three archetypes

Reinventors

31%

Seven variables

Customer experience focus
– Data and insights to innovate products and services

Practitioners

38%

Deploying digital technologies
– Latest technologies to transform interaction and transactions

Competitive strategy

– Disrupt by changing the rules of the game
– Data and analytics to inform business strategy

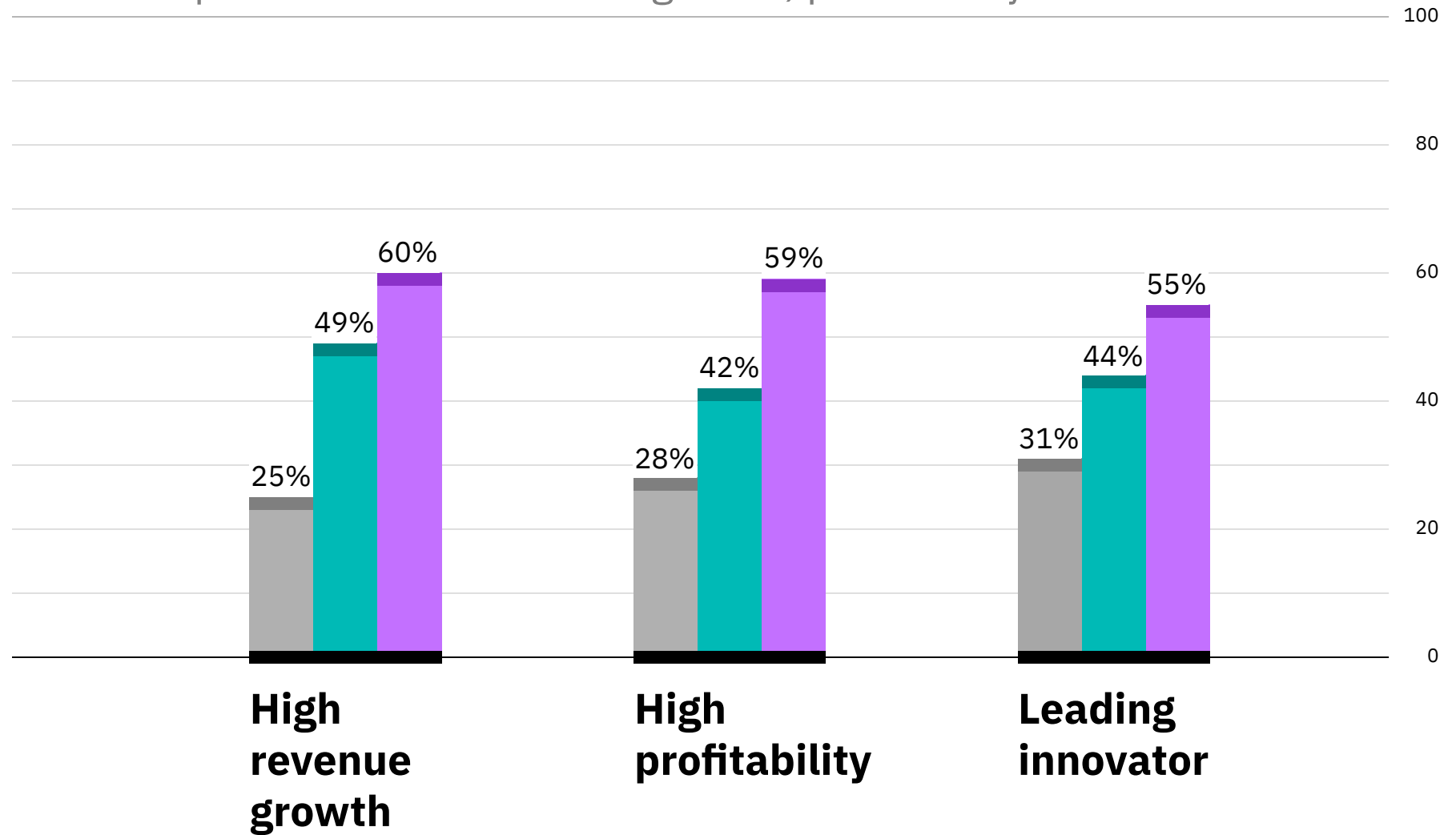
Aspirationals

31%

Organization agility

– Rapid prototyping to test and refine strategy
– Aligned IT and business strategy
– Short feedback and adaptation cycles

Financial performance – revenue growth, profitability and innovation

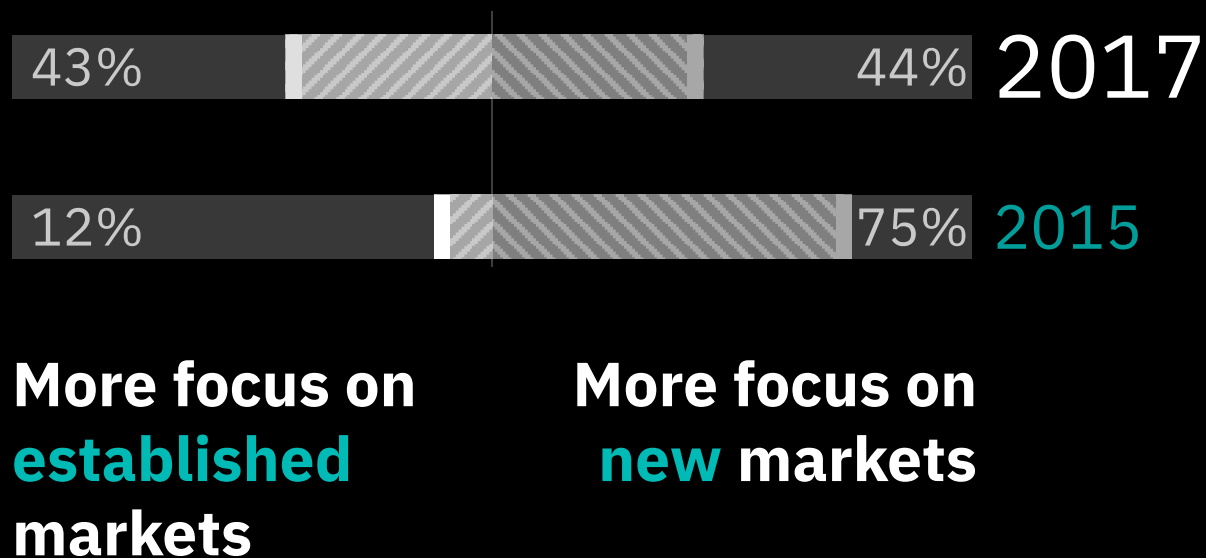


M&E
Reinventors
outperform
on revenue
growth and
profitability
while
leading in
innovation

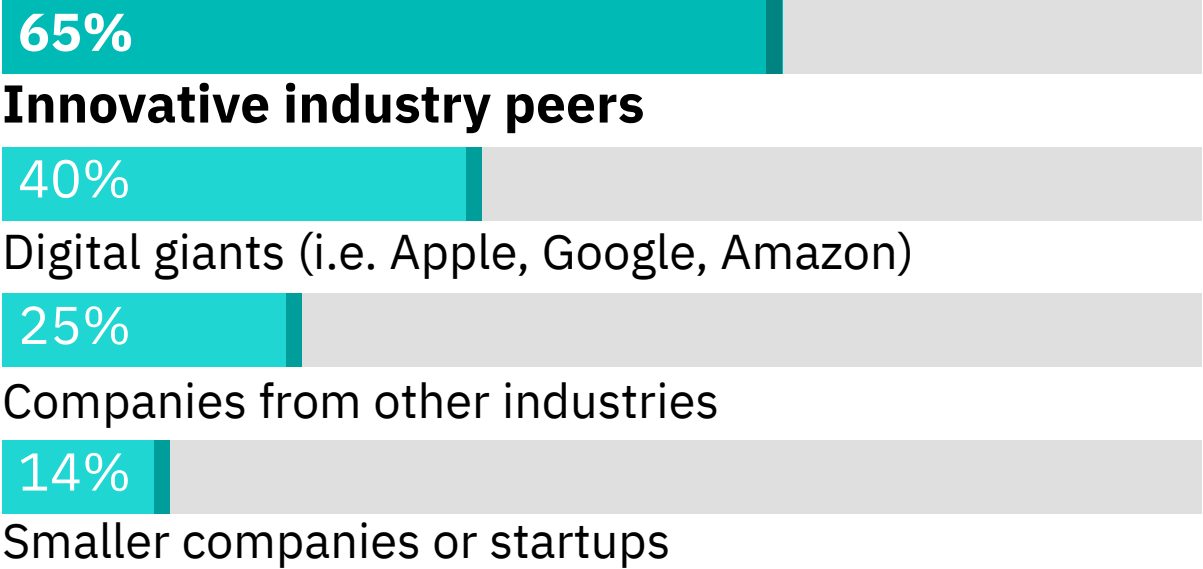
Reinventors
Practitioners
Aspirationals

M&E has shifted back to a balance between focusing on existing versus new markets

Direction of business landscape change in the next 2 to 3 years



Types of enterprises leading the disruption within the Media and Entertainment industry



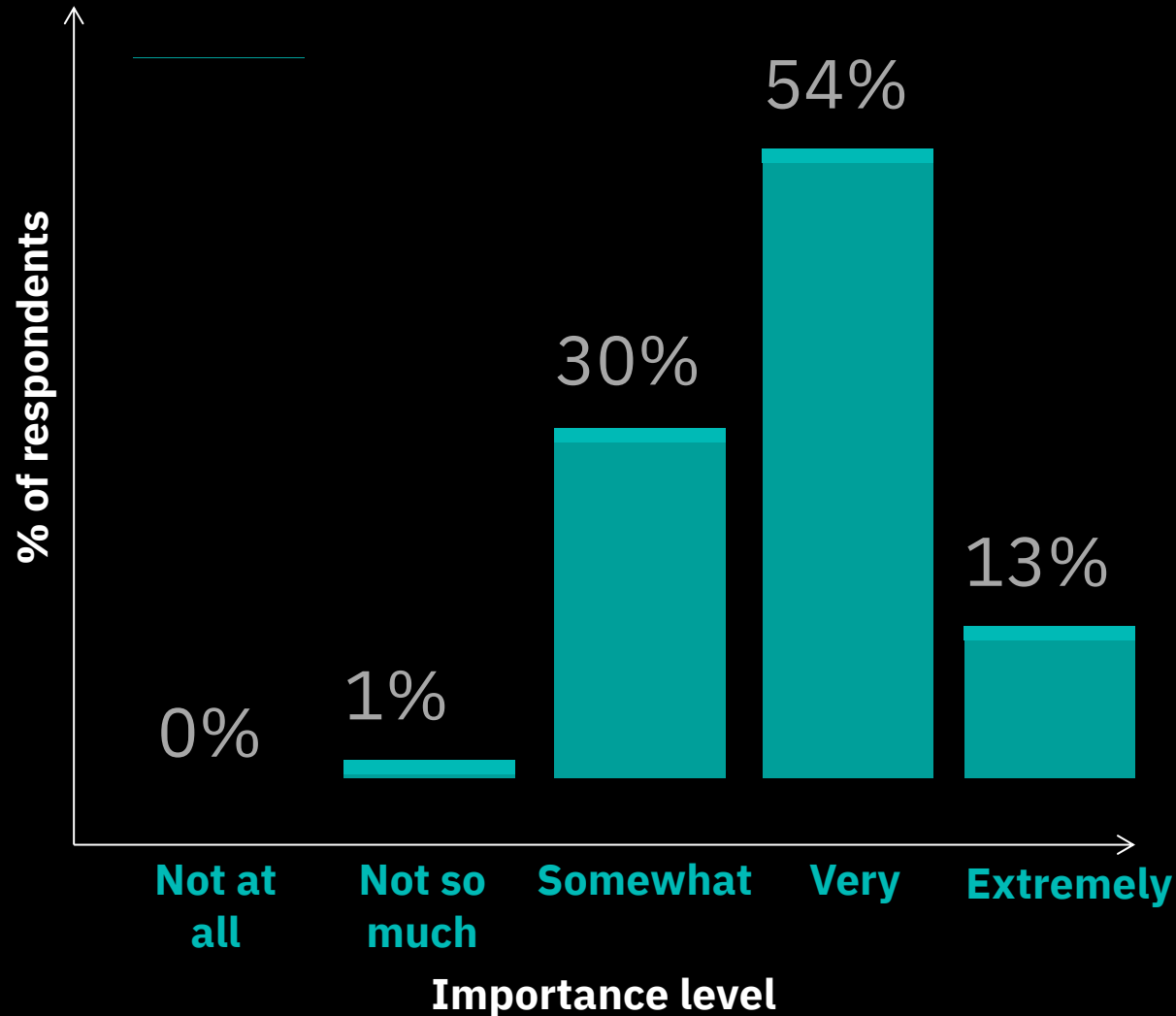
Innovative industry peers lead disruption within the M&E industry

“We were successful in moving upstream by using constant innovation in technology and workflows that exceeded customer requirements.”

Chief Information Officer
Media and Entertainment
United Kingdom

Gaining audience or customer insights is important

Gaining audience or customer insights is very important for M&E companies



“Artificial intelligence will generate insights that help the industry predict customers’ choices more accurately.”

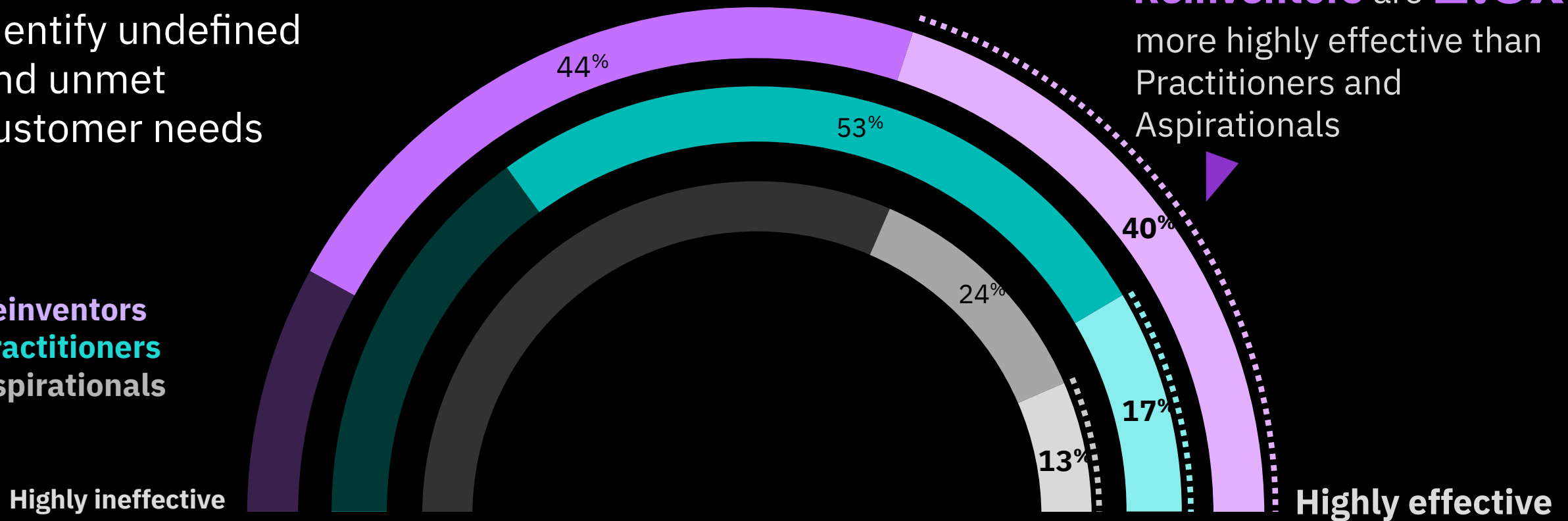
Chief Marketing Officer
Media and Entertainment
United States

M&E Reinventors are far more effective at using data and insights to discover customer opportunities

We use **data** to identify undefined and unmet customer needs

Reinventors are **2.5x** more highly effective than Practitioners and Aspirationals

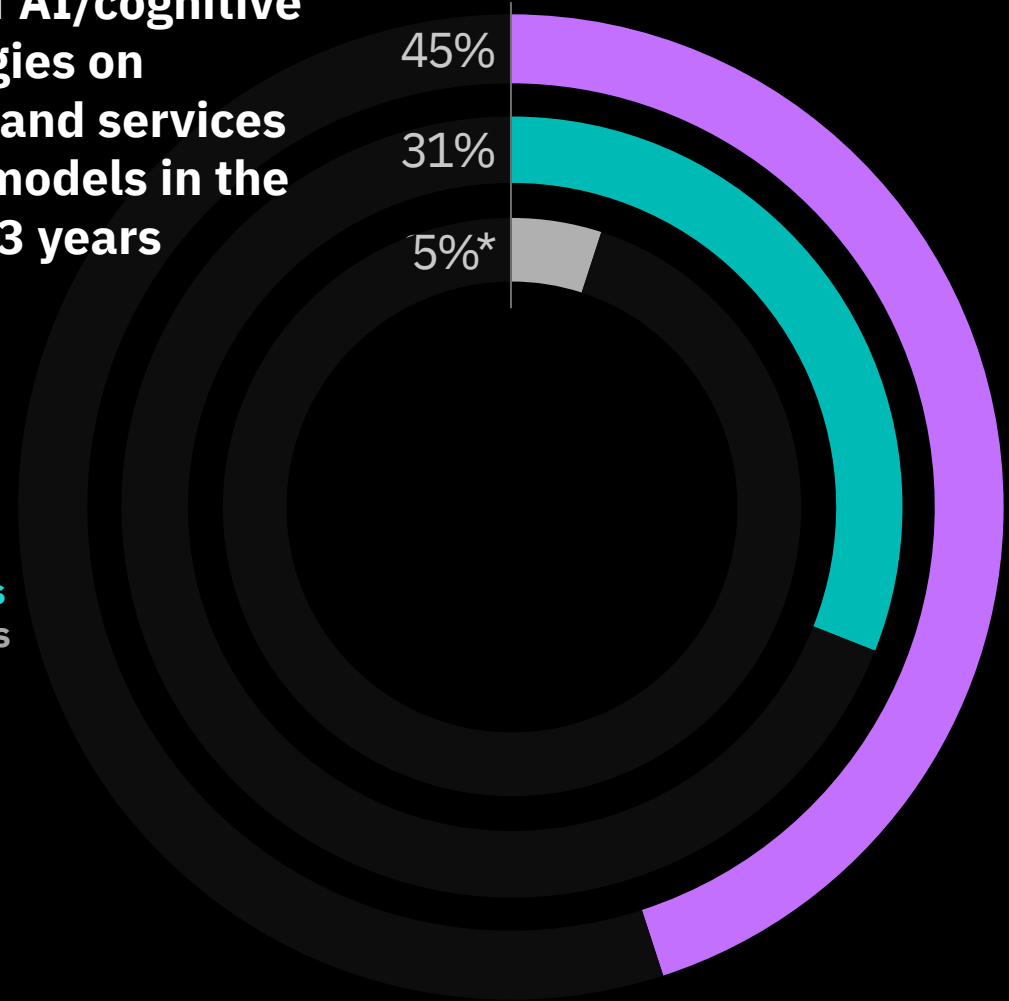
Reinventors
Practitioners
Aspirationals



M&E Reinventors
are also more
tuned into the
potential of AI to
improve their
delivery models

Impact of AI/cognitive
technologies on
products and services
delivery models in the
next 2 to 3 years

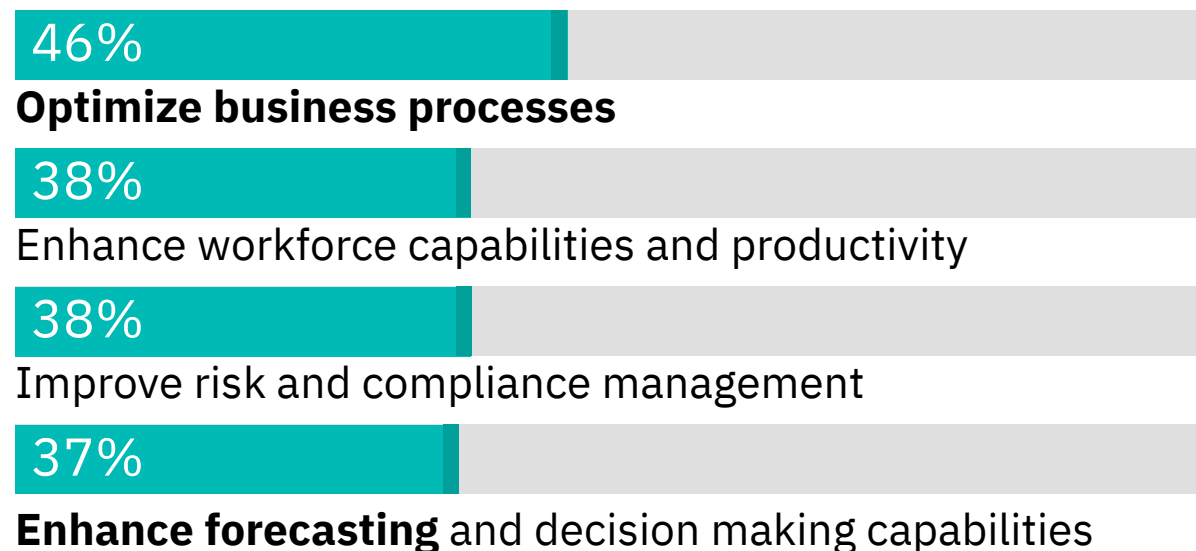
Reinventors
Practitioners
Aspirational



*Low n-count

Almost half of M&E CxOs who plan to invest in AI see the potential to optimize business processes

How AI will be used to help the enterprise compete in the next 2–3 years



“AI/Cognitive computing will bring efficient automation in the industry.”

Chief Executive Officer
Media and Entertainment
China

To thrive in the new era, M&E need to focus on **3** areas: customer insight, scalable platforms and media services optimization

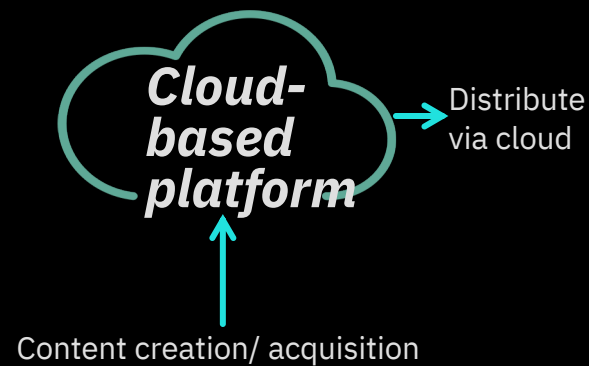
Customer insight

Deliver the best **personalized experience** to every consumer in context, in the moment and all the time



Hyper-scalable platforms

Implement **cloud-based platforms** to connect producers and consumers and to support the entire content creation and distribution value chain



Media services optimization

Optimize **business agility** through optimizing workflow management, rapid prototyping and implementing cognitive and blockchain capabilities



Dated recommendation engines

Shallow analytics

REGULATORY CHALLENGES

POOR CONTENT DISCOVERY

Scale to meet growing demand

Fragmented audiences and viewing

Costly manual metadata creation

Fragmented devices

Inaccurate ad targeting

Infusing Watson to Solve Today's Challenges

Increased maintenance labor cost

Lacking business intelligence for content acquisition

SUBSCRIBER CHURN

Weak personalization

Short content shelf life

Massive, unmanageable, unmonetizable content libraries

High content creation cost

Maintain consumer satisfaction

INEFFICIENT BACK END PROCESSES

1 Understanding viewer behavior and preferences

Complex content rights management

1

THE FOLLOWING PREVIEW HAS BEEN APPROVED FOR
APPROPRIATE AUDIENCES
BY THE MOTION PICTURE ASSOCIATION OF AMERICA, INC.



www.filmratings.com

www.mpaa.org

Watson Video Enrichment

Watson Video Enrichment uses industry leading AI capabilities to analyze textual, audio, and visual data within multi-media content, to build easily searchable metadata packages for every asset.

By understanding content in new ways, media companies can improve content discovery, increase operational efficiency, deliver higher ad revenues, drive viewer engagement and offer entirely new ways to meet the demands of their businesses.

Watson Captioning

IBM Watson Media is Raising the Bar for Closed Captioning

- **Automatic Natural Cue Segmentation:** Watson Captions automatically segments caption cues at natural breaking points, delivering greater readability.
- **Faster Than Real Time:** Content ranging from 21 to 24 minutes in length can be captioned in under 7 minutes.
- **Self-Learning:** Learning from every correction, Watson Captions is continuously evolving and improving accuracy rates.
- **Custom Corpora:** Customized glossary to extend vocabulary, provide greater context, increasing % confidence/accuracy.
- **Maintain Quality Control:** Manual override using the online caption editor interface, optimized for maximum efficiency.

CLOSED CAPTIONING

Closed captioning and translation services can be expensive, complex, and error prone.

- New and changing closed captioning standards, as well as regional rule variations, add to the challenge
- Captions are often either way out of sync with the dialog or else only partially available in content
- Live captioning adds a greater challenge as accuracy errors increase dramatically

Leveraging the power of Watson, IBM technology can help ensure real-time, accurate closed captions.

As the amount of content grows, automating key services and keeping costs in check is critical to success.



Confidence	Text
43%	But that celebration seemed to irk Djokovic.
93%	On the very next point, showed why he's the number one player in the world.
75%	Big backhand down the line.
88%	Djokovic wouldn't lose another point in the tiebreak.
79%	But Wawrinka had shown his mettle.
79%	He was down 4-1 in the opening set to force that tiebreak.
79%	In set number two, he started to come on strong.
88%	Backhand brilliant. Mentally tough he would continue to put pressure on Djokovic
93%	But the Serbian up to the task.
93%	2015 US Open champion Novak Djokovic trying to find a rhythm, but couldn't.
93%	And the second set would go to Stan the Man.
96%	Frustration boiling over as Djokovic,
62%	trying to settle himself.
89%	It became a best of three set match and Wawrinka got off on the right foot early.
84%	Djokovic on the move, always so steady, usually in control of his emotions,
84%	but they seemed to be boiling over as Wawrinka continues to put pressure on.
84%	And the forehand working mightily.
74%	As Wawrinka takes a two set to one lead, Djokovic starts to break down.
87%	Both his ground strokes and his body.
87%	Apparently looking as if he's cramping, he motions to the chair that he'd like to see the trainer.



CHALLENGE

Enhance experience at US Open by transcribing video content into text. Convert spoken interviews and broadcasts into written transcripts for media, fans, players & coaches.

SOLUTION

Watson Speech to Text API, auto generates subtitles and transcripts by leveraging machine intelligence - grammar / language structure with knowledge of audio signal composition. Both live / on demand achieve dynamic transcript correction

BUSINESS BENEFITS

Faster turnaround time and continuously expanding knowledge base / past error correction – cost and time savings.



Select an event ▼ Select a player ▼ R1 R2 R3 R4 QF SF F

Today Yesterday [Reset](#)

Total Clips Processed: 0 Hours of Coverage: 0



Men's Singles SF: Rafael Nadal vs. Juan Martin del Potro
 Set 3 : 15-40 : Break Point; Nadal wins the point with a forehand winner.

 19 Crowd Cheering	 Match Analysis	 Player Gestures	 Overall Excitement
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[Excitement](#) | Most Recent

- 0.91** Saturday 2:20 AM

R. Nadal vs. J. del Potro

Set 3 : 15-40 : Break Point; Nadal wins the point with a forehand winner.
- 0.90** Friday 7:39 PM

D. Schwartzman vs. M. Cilic

Set 4 : AD-40 : Match Point; Schwartzman wins the point with a forehand winner.
- 0.89** Thursday 1:59 AM

R. Federer vs. J. del Potro

Set 1 : 40-15 : Federer wins the point with a backhand winner.
- 0.89** Monday 10:48 PM

J. del Potro vs. D. Thiem

Set 2 : AD-40 : del Potro wins the point with a forehand winner.

TED

watson.ted.com

CHALLENGE

Build a cognitive “discovery engine” for users to explore ideas inside all TED Talks videos via Q&A or keyword and metadata search in natural language.

SOLUTION

Via Tone Analyzer & NLU APIs, Watson analyzes concepts, keywords, sentiment, language & taxonomy - curates a playlist of short video clips to offer various perspectives on user’s question / keyword.

BUSINESS BENEFITS

Enhanced search & index: Makes most relevant content more accessible to users, extracting the meaning in a way that typical metadata cannot





CHALLENGE

Creation of engaging highlights for rapid distribution of the Masters tournament.

SOLUTION

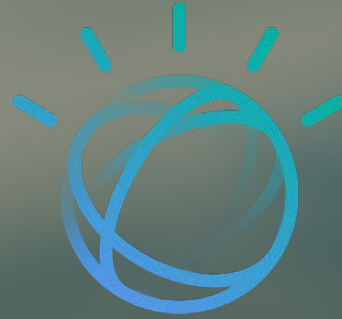
Video enrichment watches 100+ hours of Masters footage, in real time, and creates highlights of the most exciting segments. Advanced AI techniques, Watson consumes the Masters looking for 4 factors: overall excitement, commentator excitement, action recognition e.g. gestures and crowd engagement.

BUSINESS BENEFITS

Highlight clips created in near real-time for sharing on social media/other high value outlets, enhanced search and index: makes most relevant fancontent highly accessible

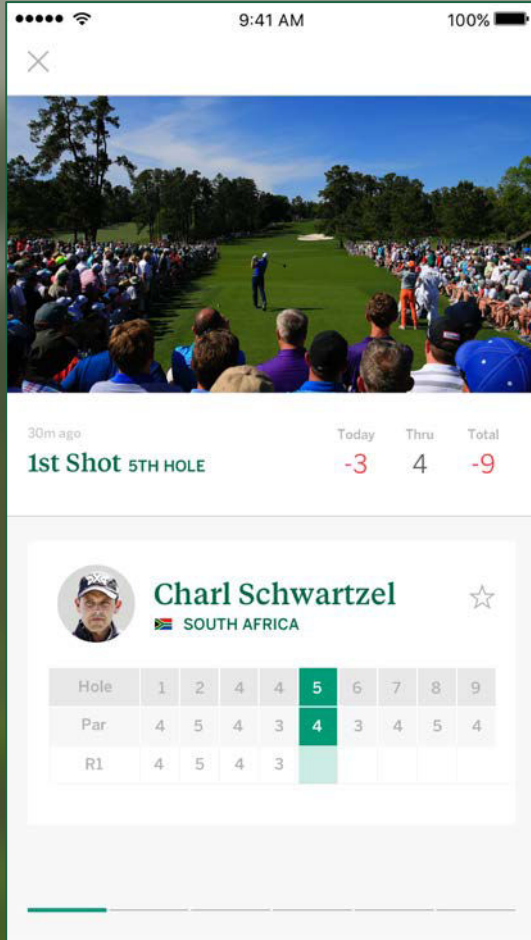


WATSON AI HIGHLIGHTS

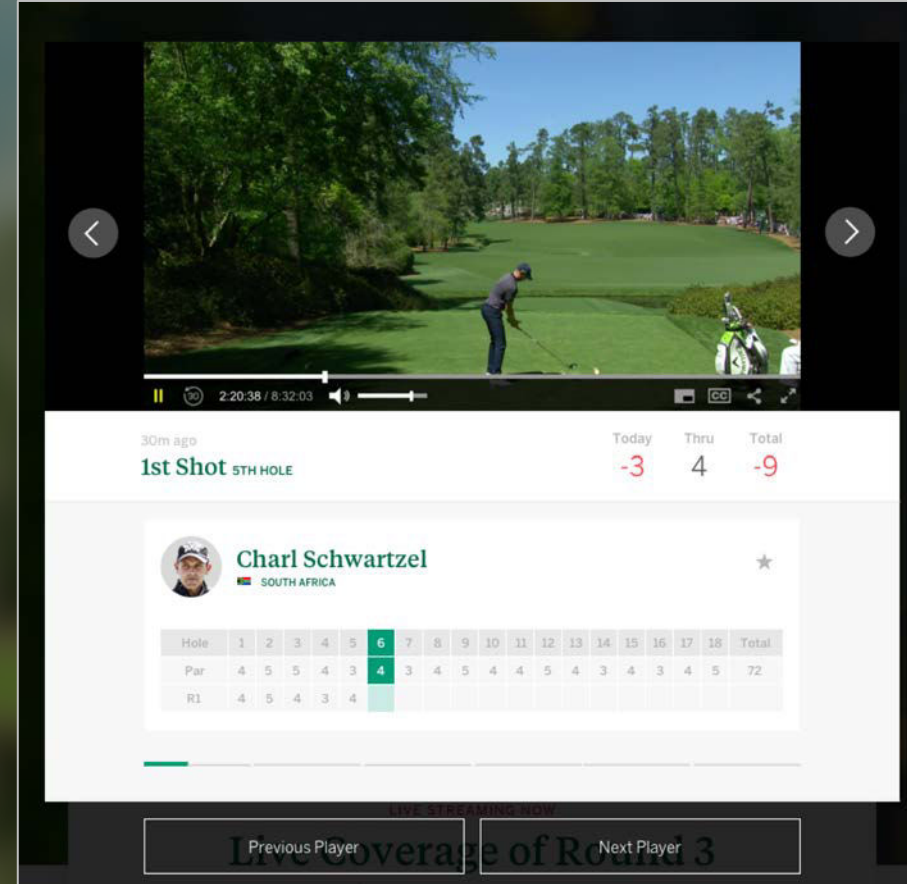


Watson AI Highlights Solution:

- Watches hundreds of hours of live video streams
- Identifies the player, hole and score with OCR
- Auto-clips thousands of highlights
- Analyzes facial gestures, commentator tone and crowd noise
- Rates the “excitement” level of each clip
- Creates a collection of most exciting tournament videos personalized to the end user



My Moments –
Personalized Video
Highlight Reel



Player Moments –
Collection of all videos
for a player



watson.grammy.com/lyrics

CHALLENGE

Leverage Watson's artificial intelligence power to improve and expedite production workflow and deliver a more engaging digital fan experience.

SOLUTION

Watson will ingest, analyze, categorize and tag: audio, visual, and video content to create enriched metadata that enables AI indexed video, automated highlight clipping, photo workflow enhancements, photo pickers and gallery generators, a fashion analysis dashboard and lyrical analysis.

BUSINESS BENEFITS

Expedited photo & video curation for Grammy.com delivers fans more compelling content, faster. Watson integration optimizes/new workflows and improving CMS inefficiencies.





VIDEO ENRICHMENT UNLOCKS...

Improved business intelligence

HIGHLIGHT CLIPPING Optimized operational efficiencies

Better ad targeting Expanded reach to grow your audience

RECOMMENDATION UPLIFT

Fast-tracked creative workflows Video summarization

Logo identification **CONTENT SEARCH & DISCOVERY**

Improved marketing ROI Auto-detect fidelity issues

Automatic chaptering **COMPLIANCE** Heightened security

Automated quality assurance processes

CLOSED CAPTIONING Enhanced disability services

Increased social media engagement

Premium video solutions for the world's leading brands

MEDIA & ENTERTAINMENT



ENTERPRISE

