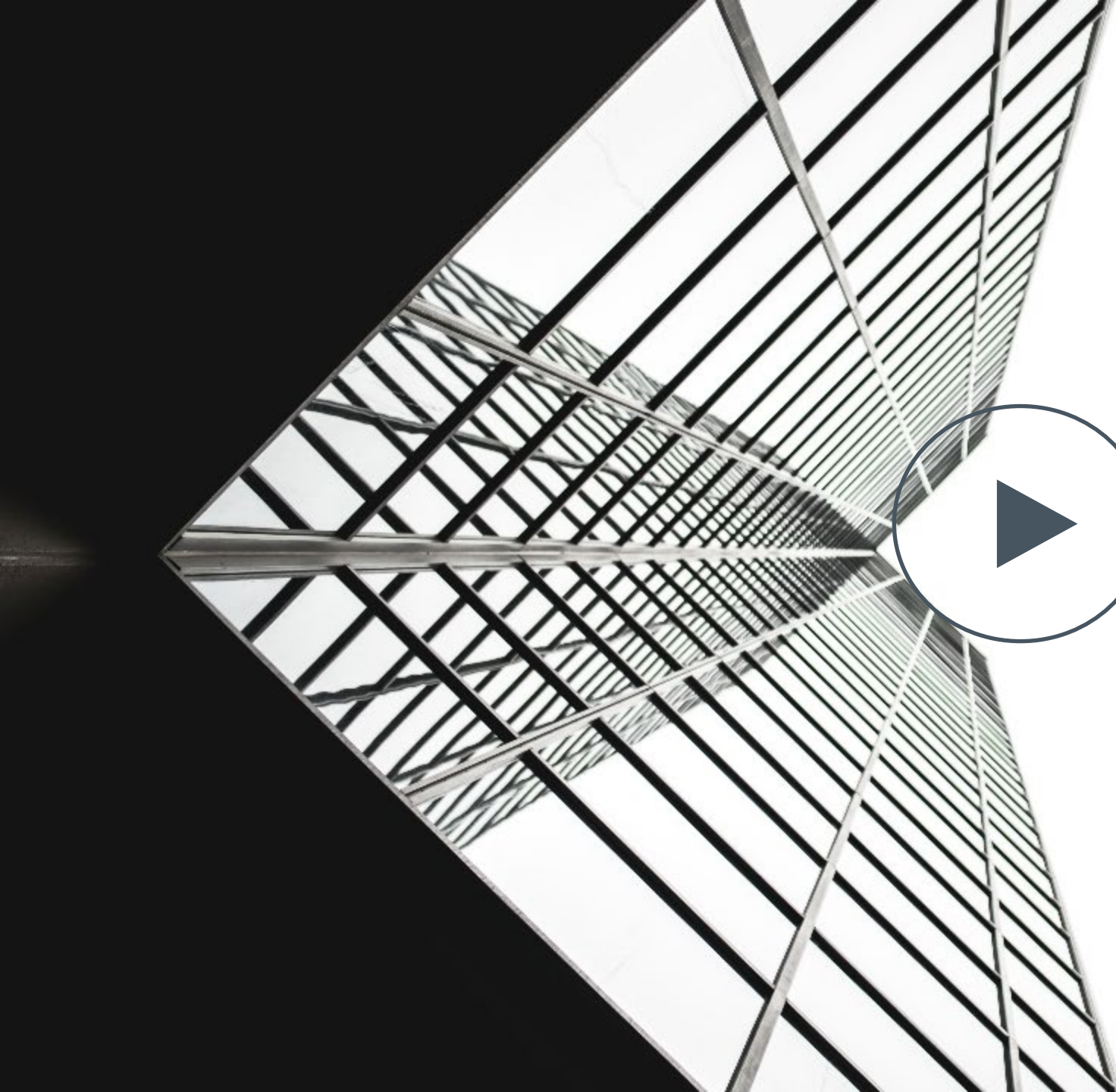


AI / Technology Teach-in

10 October 2023





**Welcome,
introduction,
objectives**

Ian El-Mokadem



Our aims for today

Unpack RWS's AI / Technology story – past, present & future

Explain how AI & technology are critical to RWS & our industry

Showcase the capability & expertise in AI & technology across the Group

Illustrate how we see AI contributing to growth and efficiency

Outline some of our future AI / technology developments

Meet our experts and understand how our products and services position us to be a beneficiary of developments in AI

Speakers and agenda

2.00



Ian El-Mokadem
Welcome; RWS & Technology



Thomas Labarthe
Technology / AI Overview



Mihai Vlad
Language Weaver



Matt Hardy
Trados



Alex Abey
Content Technology

Panel Q&A

Ian, Thomas, Mihai, Matt, Alex

Technology demonstrations

Ian El-Mokadem
Welcome to part 2

Vasagi Kothandapani
TrainAI

3.50

Break

4.15



Maria Schnell
Internal Deployment of AI



Ian El-Mokadem
Summary

Panel Q&A

Thomas, Vasagi, Maria, Ian

5.30

Drinks & canapés

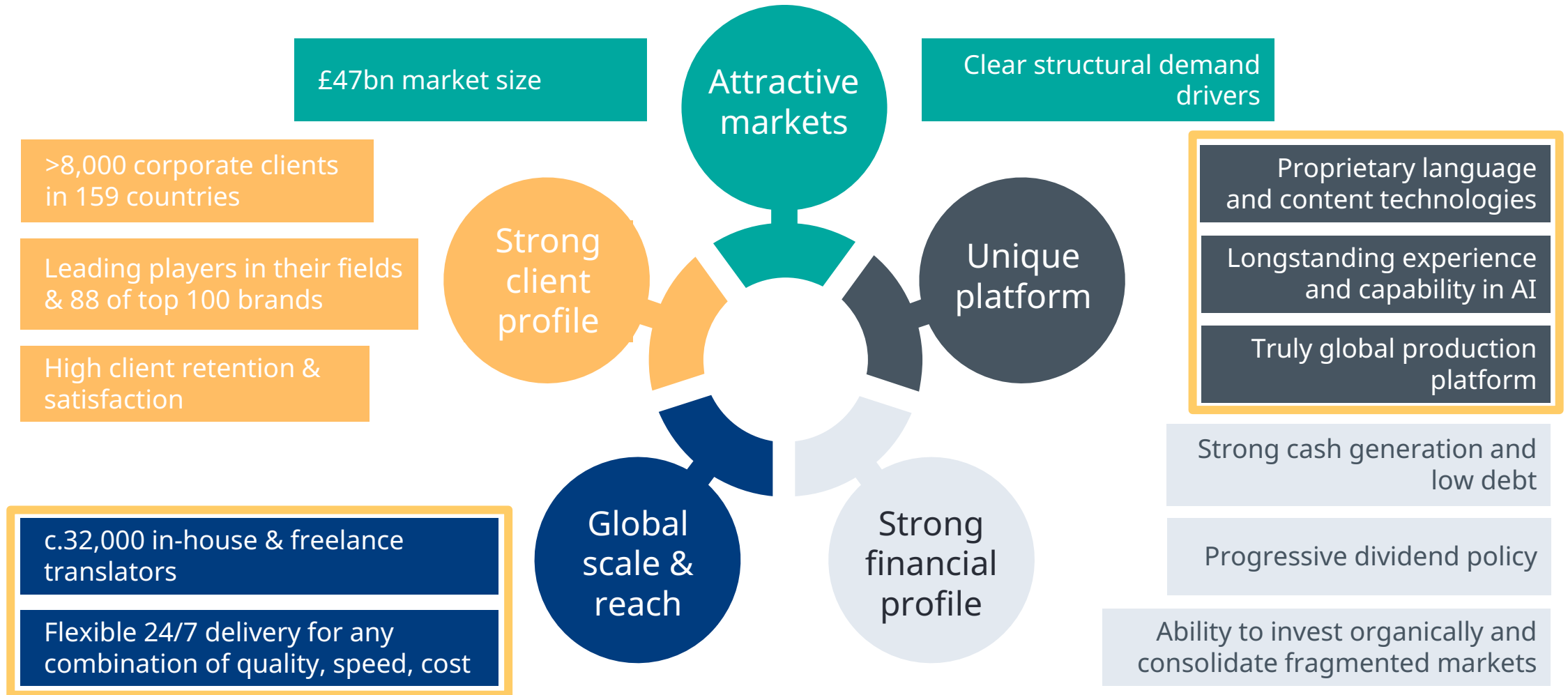
Technology demonstrations

6.30

Event ends

Who we are

A unique, world-leading provider of technology-enabled language, content and intellectual property services; well-diversified, with many leading market positions



Strong portfolio, unique production platform

OPERATING DIVISIONS	Language Services <ul style="list-style-type: none"> • Localisation solutions to multiple verticals • Includes AI data services, eLearning, video localisation and interpreting services 	Regulated Industries <ul style="list-style-type: none"> • Life sciences • Financial services • Legal services • Highly specialised technical translations 	Language & Content Technology <ul style="list-style-type: none"> • Linguistic AI - neural MT • Language technology - translation management and productivity • Content technology 	IP Services <ul style="list-style-type: none"> • Patent translation and filing • Search, retrieval and monitoring services • Highly specialised technical translations 	
REVENUE SPLIT	HY23 44%	HY23 23%	HY23 18%	HY23 14%	
PRODUCTION PLATFORM	Language eXperience Delivery				
SUPPORT FUNCTIONS	Finance	HR	Corporate Development	Technology & Data	Legal & Company Secretary

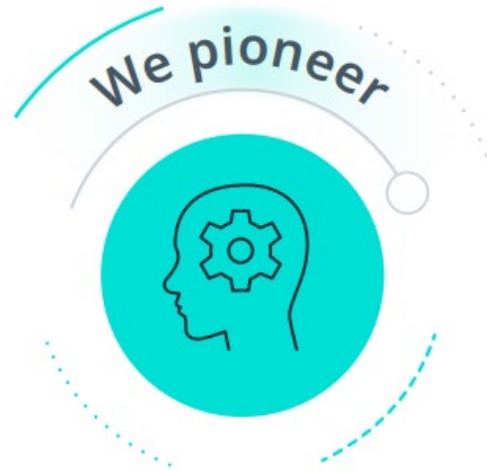
Our purpose and values

UNLOCKING GLOBAL UNDERSTANDING



We play as one team –
with colleagues, clients
and partners

X



We shape the future –
combining the best of
people and technology

X



We choose to be
positive – using every
experience to grow

=



We always keep our
promises – to clients,
colleagues and
communities

Our AI & technology story

Ian El-Mokadem

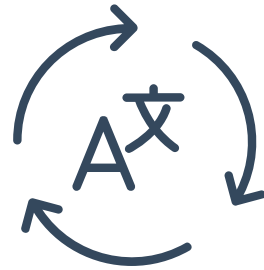


Why talk now about AI to investors?

We recognize the hype...

Today

- Walk through the opportunities
- Put the experts in front of you
- Give greater clarity on role we see for AI in serving our clients better



Capital Markets Day (Mar 2022):

- Stressed its importance
- Welcomed its impact
- Confirmed its central place in the Group's future

...however there is a real opportunity

What we have said previously

Macro environment has been challenging

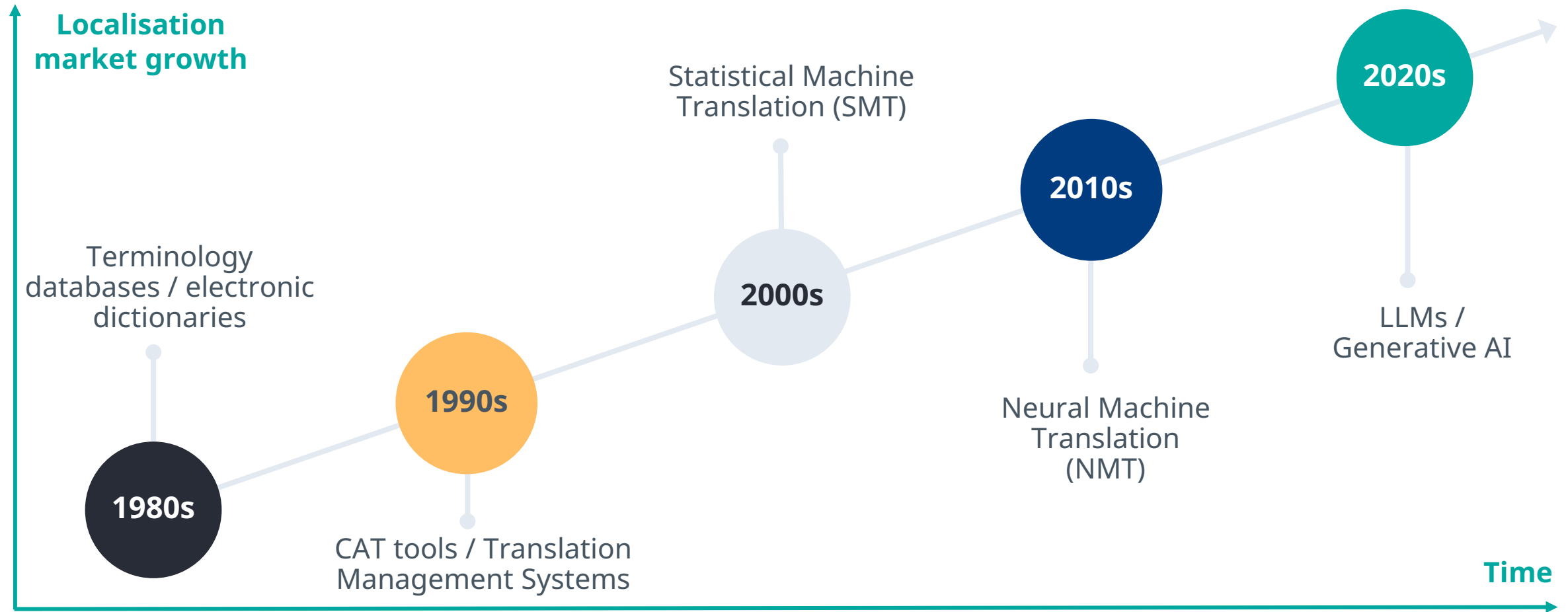
General & sector-specific factors have adversely impacted us

AI, **however**, has not been a headwind – it's a growing opportunity

Our AI & technology propositions are making a positive difference

Technology evolution and market growth

Successive technology waves have improved efficiency/productivity and lowered price/cost-to-serve



Ongoing content explosion makes technology critical factor in sector's ability to deliver what clients want

How to approach AI?

Our core convictions relating to AI in our industry

- 1 Essential to adopt AI and play a lead role in shaping its use
- 2 While their roles will evolve, humans will continue to play a key role in content transformation
- 3 AI will continue to enable further improvements in cost per word and this will be balanced by a significant growth in content and use cases
- 4 There is an opportunity for us to be a disruptor and strengthen our competitive position
- 5 Partnerships will be important

RWS is very well-placed to be a beneficiary

- 1 Opportunity to be the valued partner to our clients on their AI journey
- 2 Highly trusted on security and privacy
- 3 Already a leading player
- 4 Depth of expertise
- 5 Attractive partner and acquiror

RWS positive demand drivers

Explosion of data / content



90% of the world's data was generated in the last two years alone¹

Increasing ESG / regulatory requirements



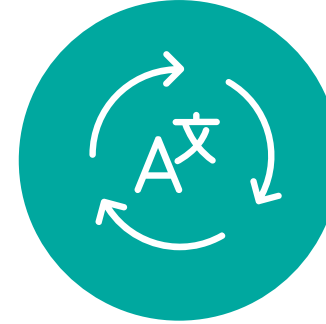
>3k rules/regulations added annually to US Federal Register since 1993²

Continued innovation



Capex investment surged 13% in 2021 and is forecast to continue growing to 2030³

Growth in AI / automation



AI to contribute \$15tr (14%) of global GDP by 2030⁴

Changing globalisation market



Value of global trade expected to grow 70% from 2020 to \$29.7tn in 2030⁵

Our strategy, launched last year, recognised the role of AI and technology in driving growth and efficiency

Long-term relationships

Cultural & technical expertise

Growth

Unique technology and AI

- Neural Machine Translation and Linguistic AI – [Language Weaver](#) and [Trados](#)
- Content Management - [Tridion](#)

Growth

Developing our portfolio

- Data Annotation – Launch of [TrainAI](#)
- Content Management – Acquisitions of [Fonto](#) and [Propylon](#)

Efficiency

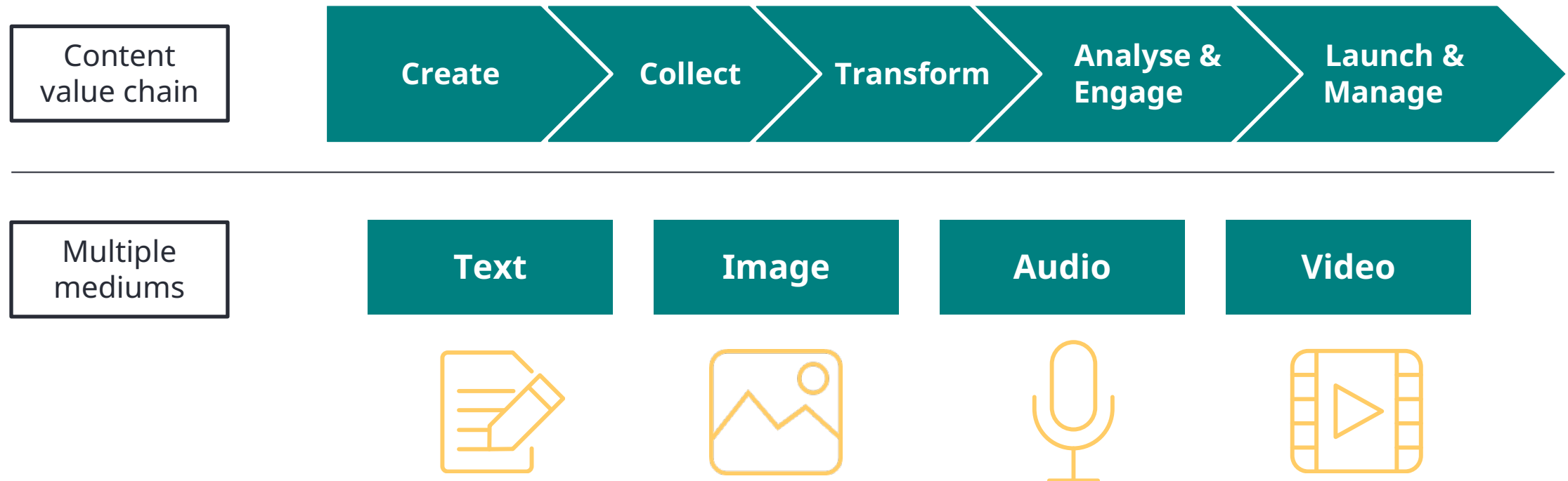
Leveraging scale and reach

- Leveraging Linguistic AI solutions within [Language eXperience Delivery](#)

AI is also enabling a dramatic increase in content of all types, creating opportunity for RWS

Using a unique combination of technology and human expertise, we support our clients to create, collect, transform and analyse, launch and manage content

This helps our clients grow, by ensuring they are understood anywhere, in any language



20+ years' experience gives us deep capability and a competitive moat

Established enterprise-grade products

Trados
Tridion

Language Weaver
TrainAI

Thought leadership

>40 patents

>100 peer-reviewed AI papers

R&D investment

>£34m*
FY22

600 colleagues

Responsible player

Data Privacy

Security

Internal deployment

>60%
MT first

MTQE

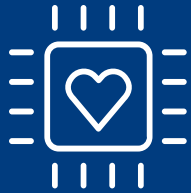
* - excludes all investments in transformation programmes (i.e. Finance, HR, LXD, IP Services)

SDL acquisition in 2020 enabled RWS from a technology perspective



AI – RWS's right to win

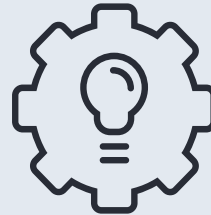
Enterprise-
grade
products



Data
creation &
validation
capability



Deep
expertise



Enviably
client set



Attractive
partner




We believe RWS is better placed than others in the sector to win

Orientation – we will explore each of these areas

Backed by longstanding experience & expertise, RWS already able to support clients through their AI journey


PRODUCTS & SOLUTIONS

EXPLORING AI


Tech Services 

Choose the right AI strategies and tools

BUILDING AI


TrainAI 

Train your AI with dependable, responsible data

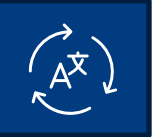
Language Weaver 

Build a secure linguistic AI platform, tailored for your business


USING AI

Language Weaver 

Understand content in any language, instantly


Trados 

Deliver translation projects smarter and faster

Structured Content Management 

Author, manage, collaborate, publish

INTERNAL DEPLOYMENT

Language eXperience Delivery (LXD) 

Extend use of AI beyond machine translation and content analysis; improve productivity & automation

AI & Technology Overview

Thomas Labarthe

**President –
Language & Content
Technology**



We will explore each of these areas

Backed by longstanding experience & expertise, RWS already able to support clients through their AI journey

PRODUCTS & SOLUTIONS

EXPLORING AI

Tech Services



Choose the right AI strategies and tools

BUILDING AI

TrainAI



Train your AI with dependable, responsible data

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USING AI

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Understand content in any language, instantly

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Deliver translation projects smarter and faster

Structured Content Management



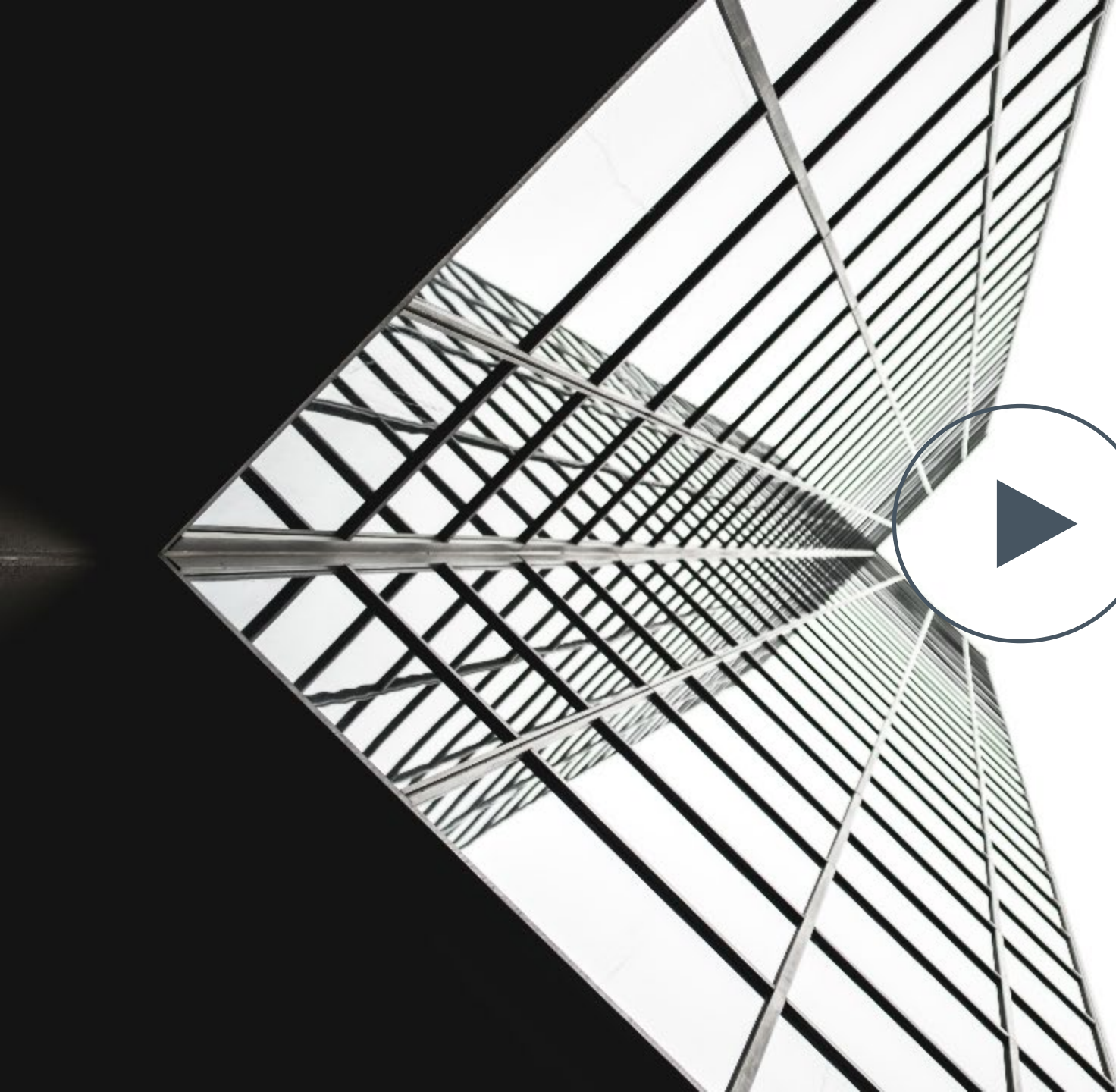
Author, manage, collaborate, publish

Language eXperience Delivery (LXD)



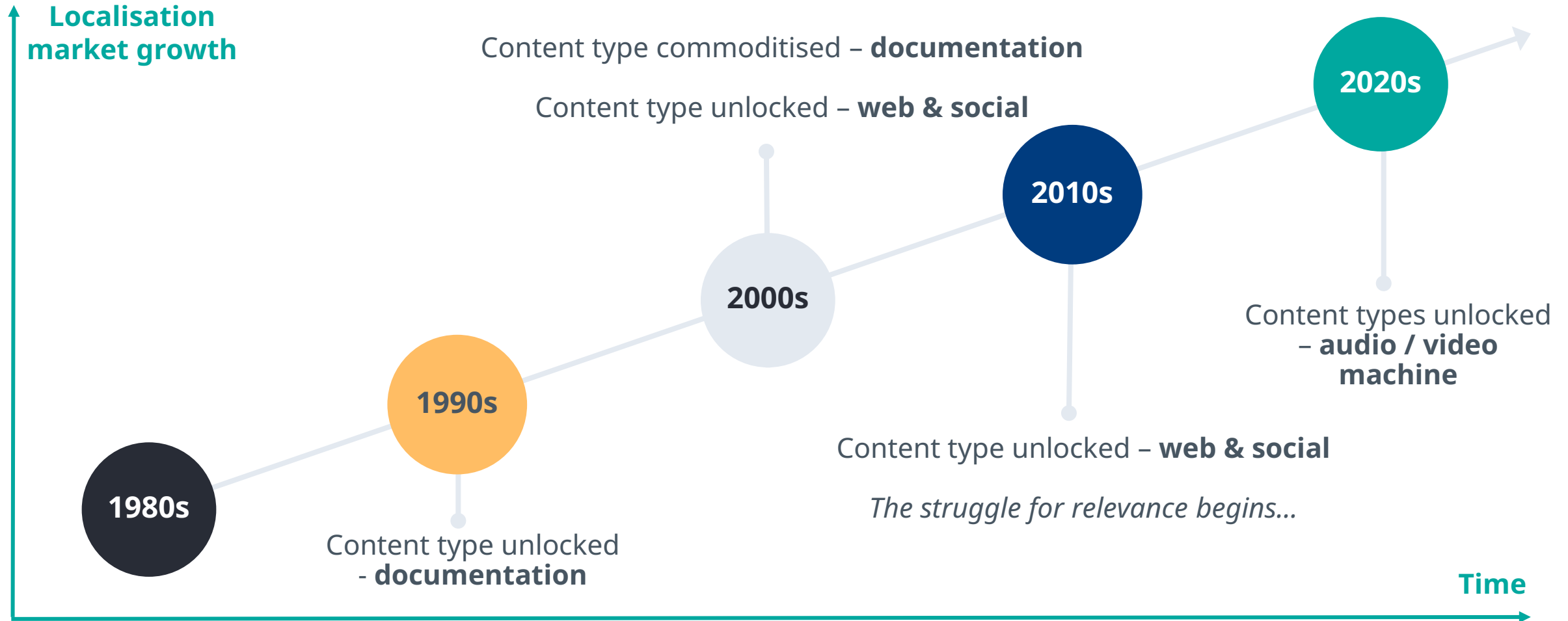
Extend use of AI beyond machine translation and content analysis; improve productivity & automation

INTERNAL DEPLOYMENT

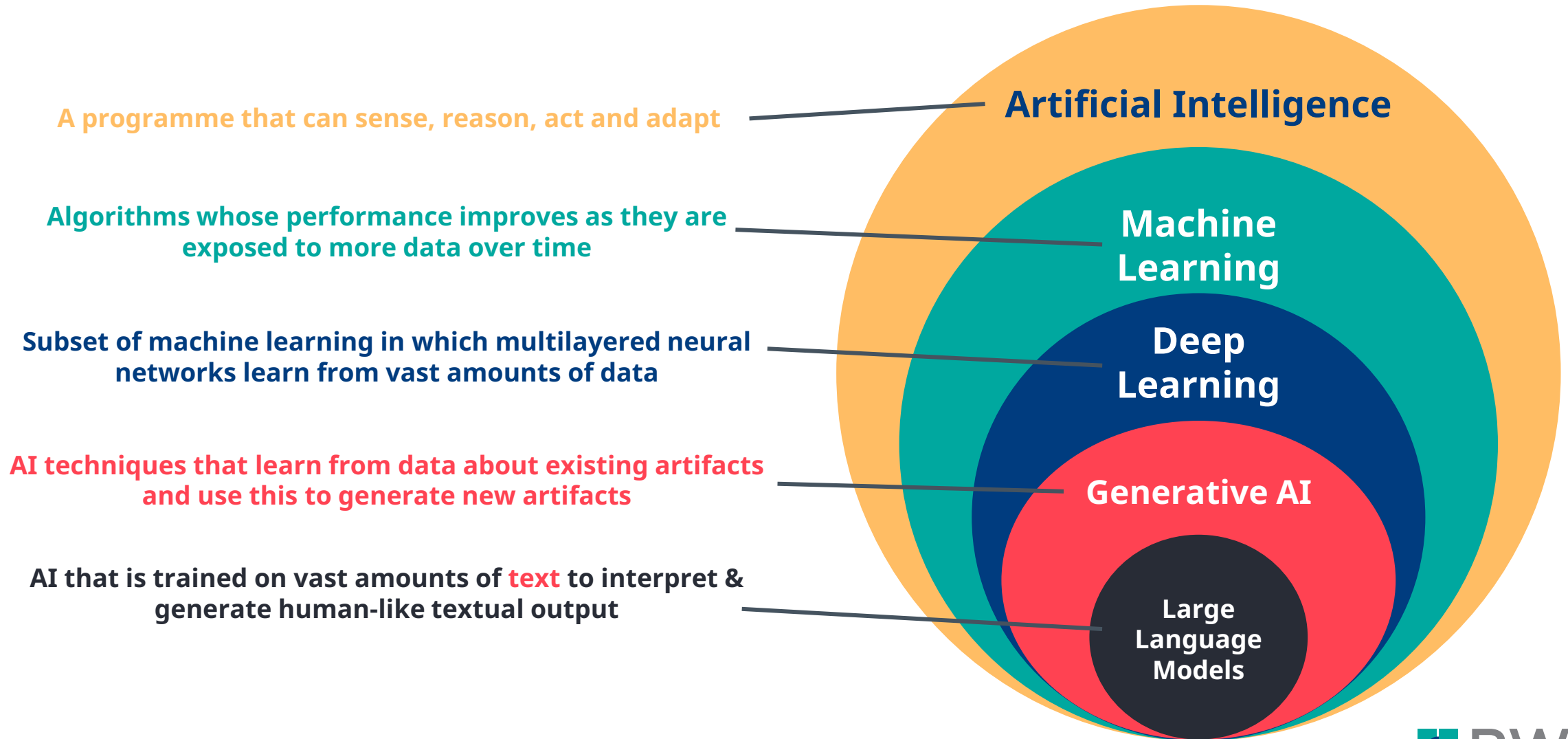


Technology has unlocked more sophisticated content









As content types are unlocked, specialist human expertise and technical capability become more critical



Terminology

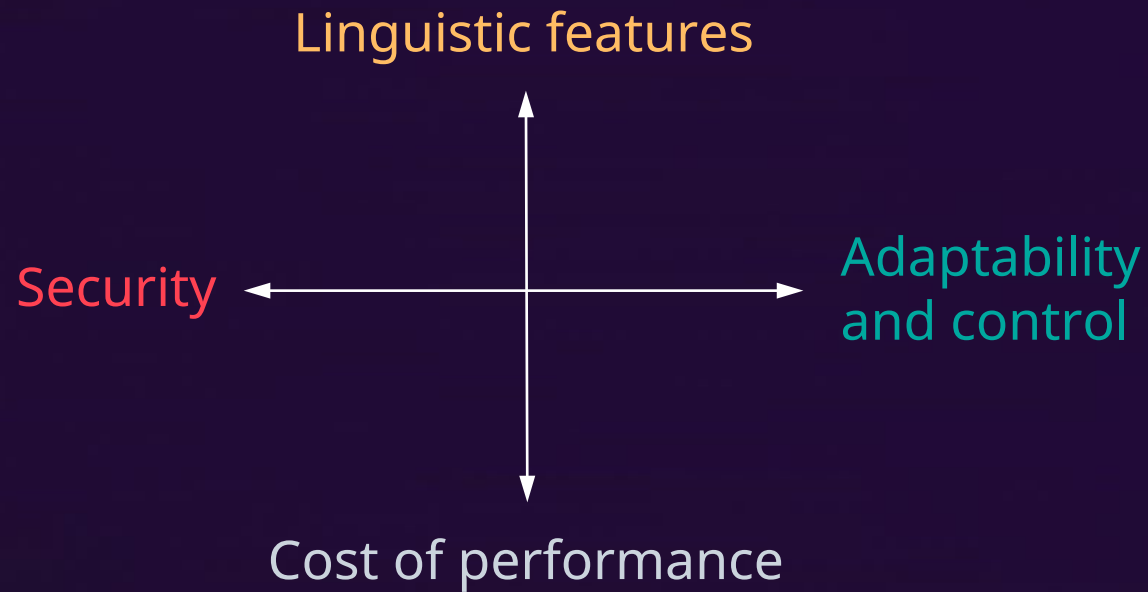


Example of LLMs being considered

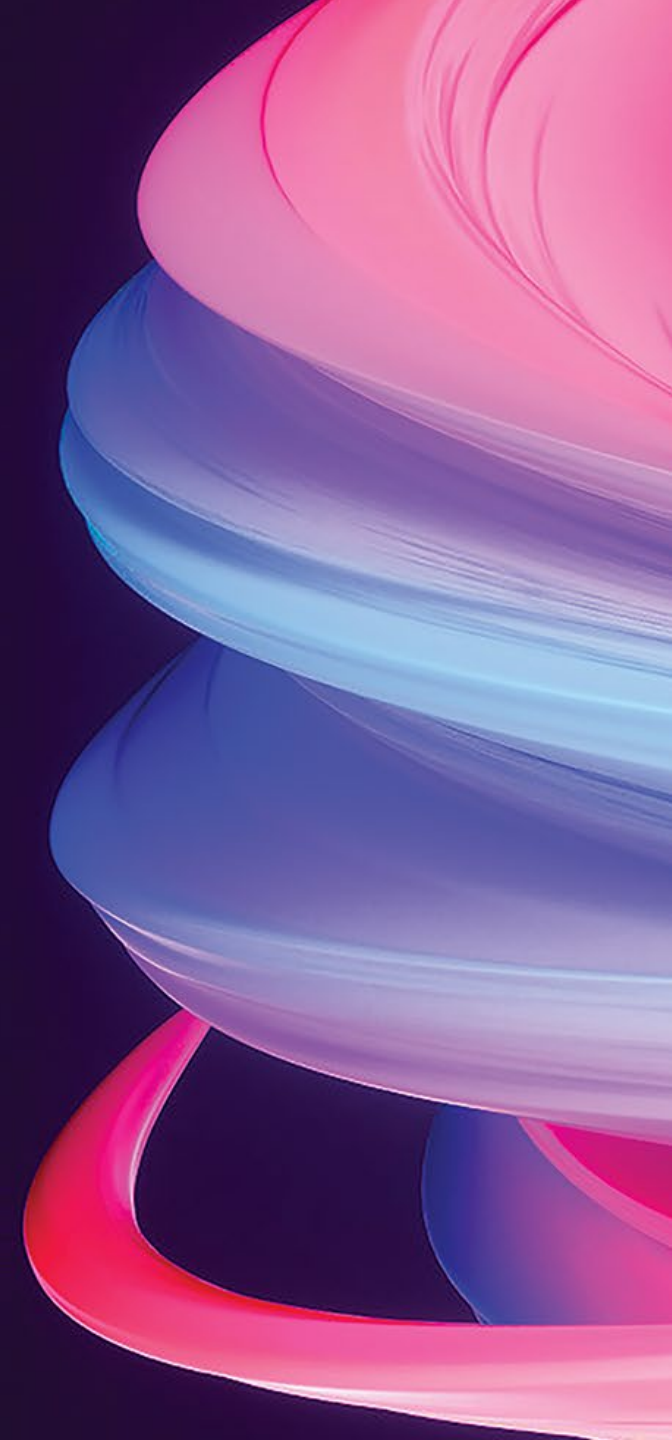
	Infrastructure	Models	Data
Generic public domain data		<ul style="list-style-type: none"> • GPT 3.5 • GPT 4 	<ul style="list-style-type: none"> • Ability to generate data
Enterprise		<ul style="list-style-type: none"> • GPT 3.5 • GPT 4 	<ul style="list-style-type: none"> • Always responsible, always ethical
Enterprise		<ul style="list-style-type: none"> • Cohere 	<ul style="list-style-type: none"> • Providing security & privacy
Private Open Source LLM		<ul style="list-style-type: none"> • Falcon 	

LLMs are key to our product roadmaps

To productise them for Enterprise customers, we need to balance 4 variables:



Leveraging Language Weaver's experience of productising other neural-based models





Language Weaver

Language Weaver

Mihai Vlad
General Manager



Session overview

Product
overview
and use
cases

Client need
and case
study

Right to win
and market
attractive-
ness

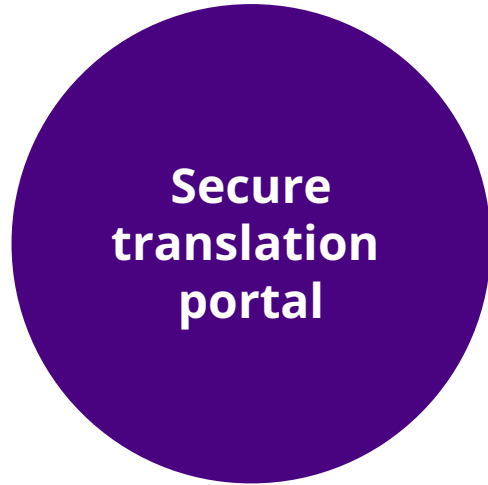
Progress
since Capital
Markets Day

The future
and
leveraging
LLMs

Transforming enterprise content, securely, using Linguistic AI

Three core use cases, across multiple end verticals

USE
CASES



REVENUE
MODELS



Broad range of multi-sector clients



Government and defence

On-premises secure translation solution for defence intelligence applications

Allow governments to translate vast quantities of highly secure content without data leaving their environment



Finance, legal and life sciences

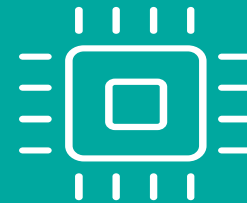
Enable secure internal communications between global offices

Facilitate multilingual eDiscovery search



Consumer enterprise

Help companies take ownership of their translation solutions; adapt and fine-tune MT engines to suit their content



High-tech clients

Integrate with advanced text analytics applications to derive insights across multiple languages

Client need

Fast, cost-effective translation

- Diverse selection of language combination
- Easy to use, supporting many file types out of the box

Enterprise-grade, secure, scalable and elastic solution

- On-premise or cloud
- Easy integration with existing enterprise stack

Adapted and fine-tuned for the specific

- Various level of adaptation: dictionaries, fluent terminology, full customised AI models and auto-adaptive models



Rialtas na hÉireann
Government of Ireland



Office DEPOT



Centralising multilingual processes saves global IT services firm 60%

This Fortune 500 company offers IT services, consulting and business process outsourcing in multiple languages globally.

“We were excited to explore the possibilities offered by Language Weaver. From building a white-label UI for our own brand to supplying demo videos for us to showcase this capability to clients, RWS has anticipated and accommodated our needs throughout the process.”

Vice President of Digital Business Operations

SOLUTION

Adaptable Language Weaver®



Multiple European processing locations migrated to a single location in India for economies of scale



Machine translation (MT) instantly translates customer information, overcoming language barriers



Multiple cloud and on-premises integration options that meet varying security requirements

RESULTS



60% back-office processing cost reduction



40% faster with simplified workflow



30 languages covered, with scalability to 50+



Quality enforced with dictionaries in Language Weaver

RWS right to win



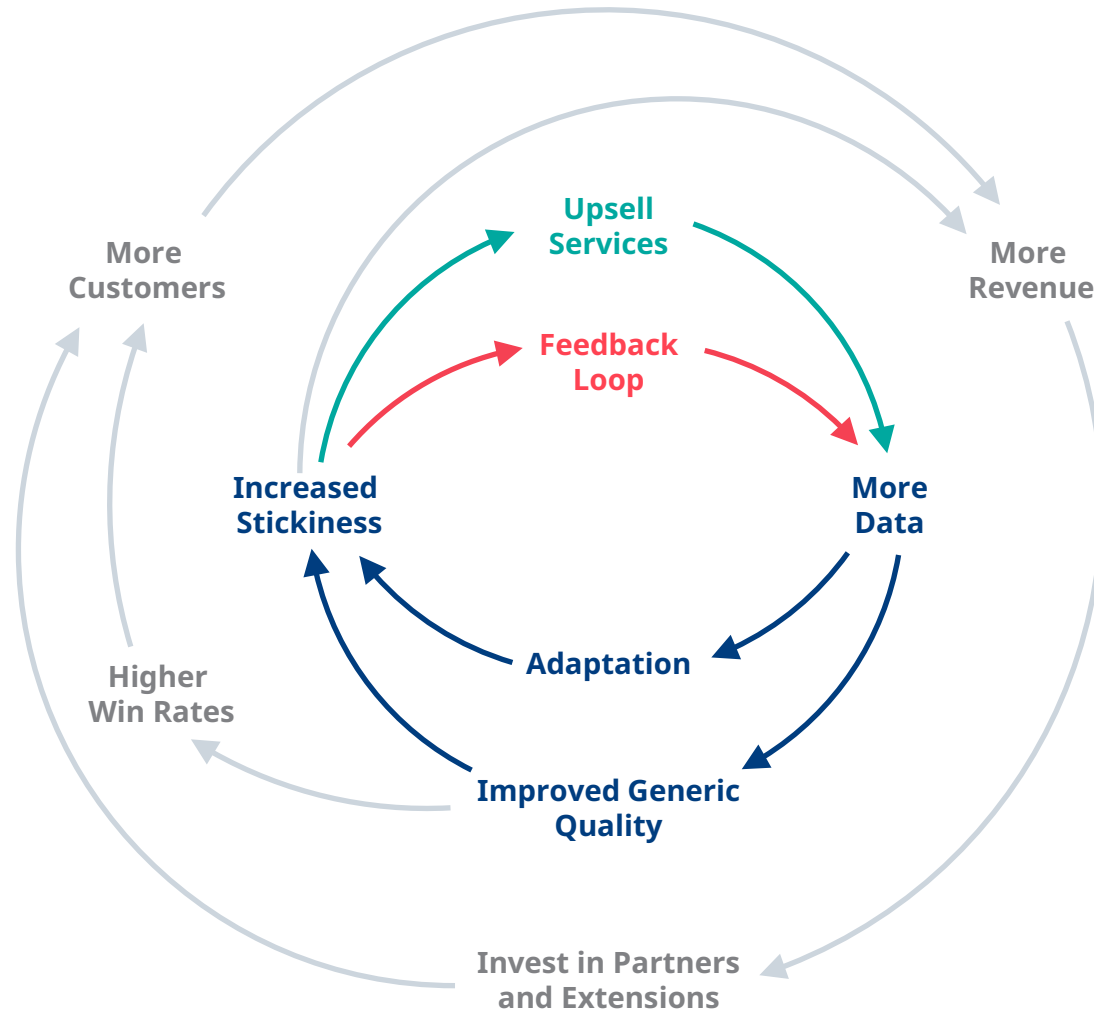
Language Weaver

Enterprise grade product
Security, scalability, pre- & post-sales support

Data Creation and Validation
Ability to create and validate data
supporting model training

'Expert-in-the-loop'
Deep experience in AI / LLMs has allowed
Language Weaver to move fast

Model adaptation and upselling services are key to our growth



Progress since Capital Markets Day

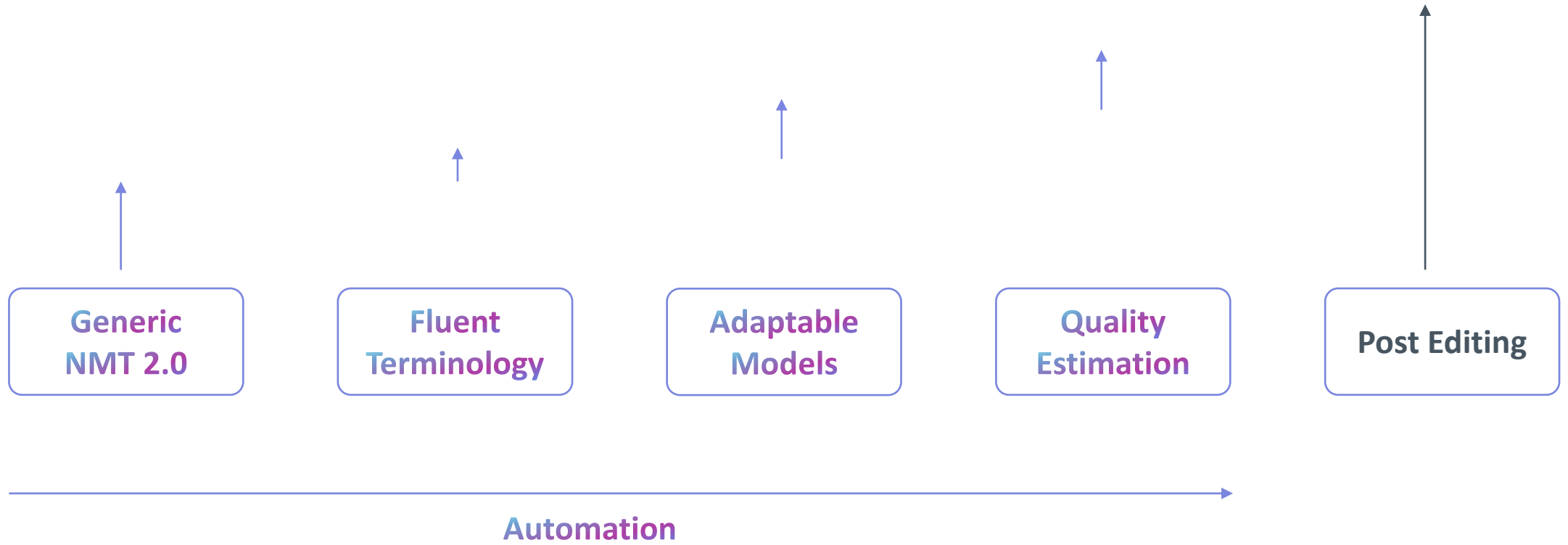
Product

- Neural Machine Translation (NMT) **quality** increased
- Started rolling out MT Quality Estimation (MTQE) in LxD to **increase post-editing speed**
- Rapid productisation of private LLMs is increasing the performance of NMT and MTQE – with 30% of the LW R&D focused on this

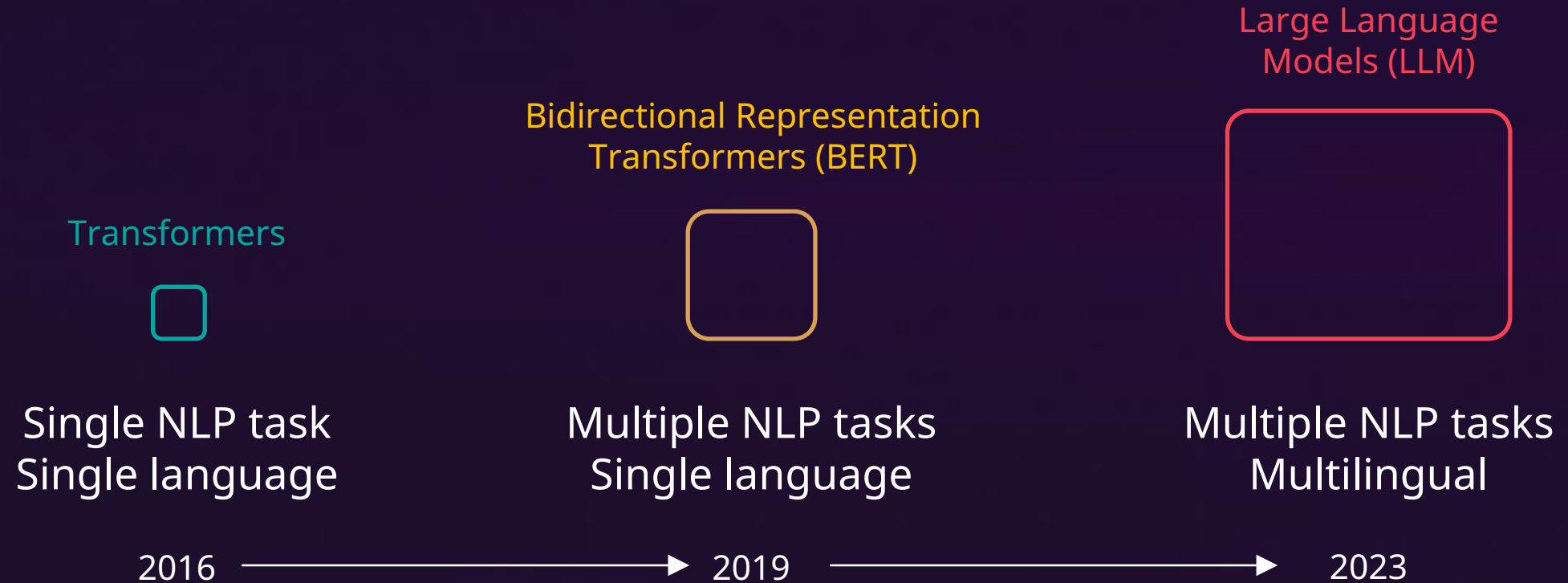
Go to market

- Refocused go-to-market, updated value proposition and branding (Secure your AI Advantage)
- Successful Legal marketing campaign delivering new business
- Existing enterprise roll-out is key to expanding new “Beyond MT” capabilities powered by private LLMs

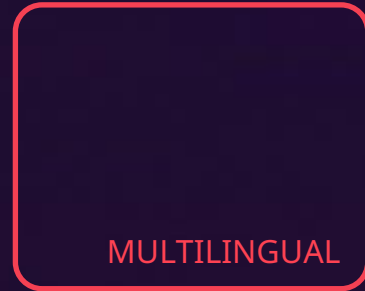
Continuous quality improvement



Linguistic AI developed significantly over past 7 years



Different linguistic tasks require different AI models



Improve Input



Adaptive MT



Alternative Translations

Smart MT



MT Quality Estimation



Multilingual Summarization

Beyond MT

The future for Language Weaver

Q1 FY24

- Enterprise-grade, **private** LLM for 2 use cases:
 - Improving MT generic quality through better input and output processing
 - Further improving localization, expanding the MT and MTQE technologies

Beyond

- Expand from document translations to **document transformations** and leverage RWS's content management offering
- Develop Middle East & North America for Government clients

Key takeaways

Well positioned in a high growth market

Strong & secure enterprise-grade product

Ongoing & critical role supporting RWS internal efficiency

LLMs give opportunity to further develop & improve



Translation productivity and management

Matt Hardy

Vice President, Product



Session overview

Product
overview &
use cases

Client need
& case study

Right to win
& market
attractive-
ness

Progress
since Capital
Markets Day

The future -
Trados & AI

We serve three connected but distinct use cases

USE CASES

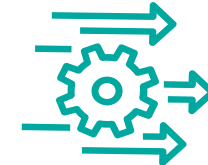
Individual translation



Collaboration between teams



Workflow & process management



CUSTOMER SEGMENTS

Corporate	1,700+	✓	✓	✓
LSPs	350+	✓	✓	
Linguist	250,000+	✓		
RWS internal		✓	✓	✓

TRADOS PRODUCTS

Studio

Team

Enterprise Accelerate

We serve three connected but distinct use cases

USE CASES

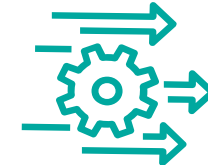
Individual translation



Collaboration between teams



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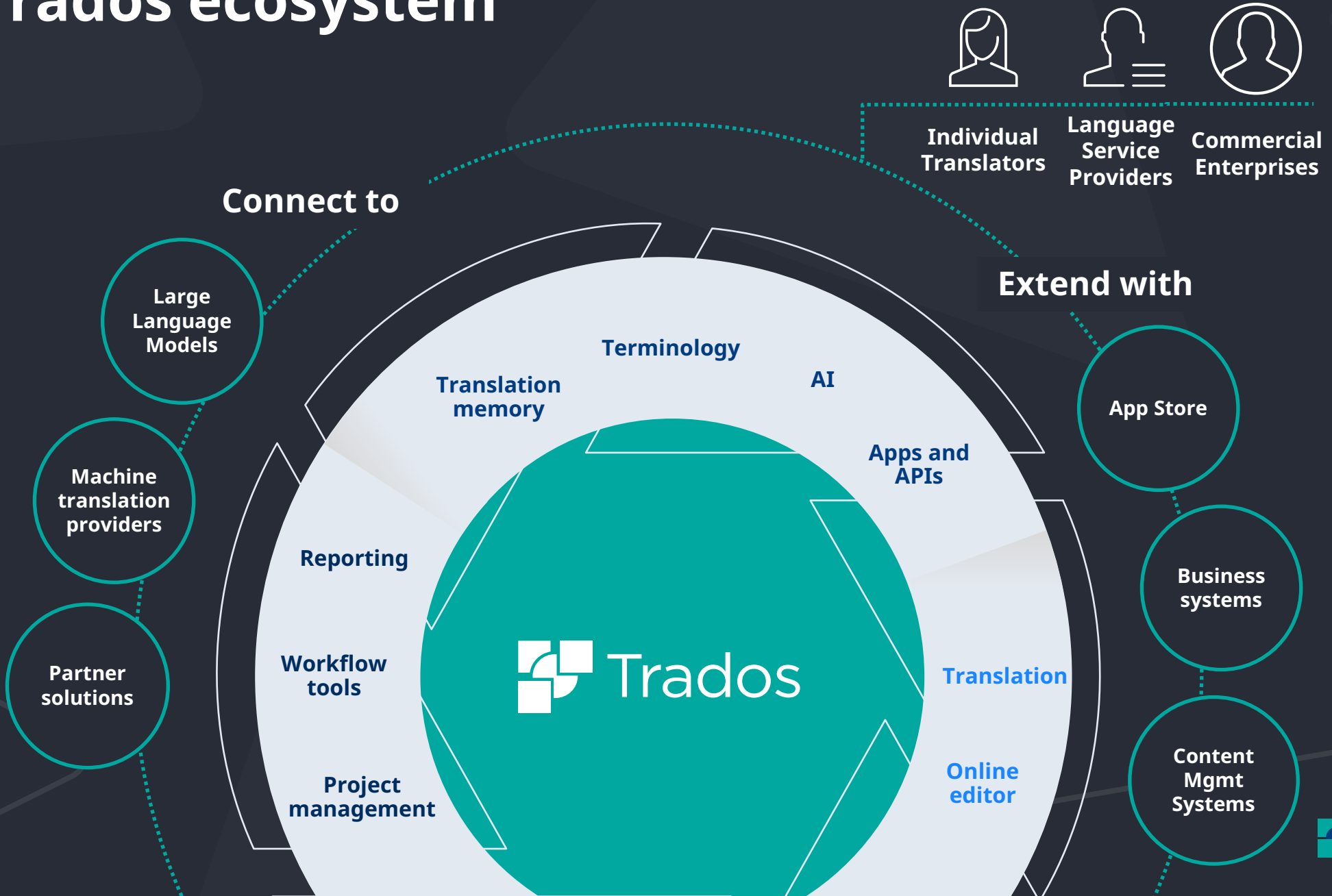
TRADOS PRODUCTS

Technology only

Bundled with services

Technology only

The Trados ecosystem





LIVE DEMO



Client need

Standardized & efficient

- Integrated workflow solution for end-to-end management of translation process
- Delivers efficiency, cost and quality
- End to end security

Value for all roles

- Single solution encompasses all roles in the localization process
- Can support any blend of automation and human involvement

Easy integration of all assets

- Flexible ecosystem allows deployment of any asset:
 - Machine translation
 - AI
 - Translation Memories
 - Terminology databases

The backbone of the localisation industry



LearnUpon localizes its user interface into nine new languages in three months

“Look for a translation partner, not a translation company. We’ve built a strong bond with RWS and they’re playing an active role in helping us grow our business. That’s what you want in a translation vendor.”

Jovana Ilijašević

Group Manager, Product Operations, LearnUpon

Solution

Trados Enterprise



Faster translation process with Trados Enterprise - Reuse, Quoting, Resourcing, Terminology, MT



Manual tasks automated to maximize efficiencies



Easy, open communication deepens collaboration



New languages consistently deliver within agreed deadlines



Proactive quarterly translations replace ad hoc approach

RWS Translation Services



RESULTS



Quotes now provided in minutes



Improved translation quality reduces customer complaints



50% faster time to market for new languages



Automation reduces risk of human error



9 languages translated in 3 months



RWS right to win



Established player
with brand equity and clear suite of solutions

Efficient & scalable development
from multi-tenant cloud platform

High levels of stickiness
once clients have implemented technology choice

Progress since Capital Markets Day

Maintaining market leadership

- Retain & enhance rich feature set
- In-platform communication
- Increased workflow flexibility
- Ramp-up of Accessibility project
- Tridion<>Trados integration
 - Maximum value for joint customers
- Improved go-to-market
 - New Trados.com website
 - Competitive packages across all buyers

Embracing emerging AI technology

- OpenAI app for Trados Studio (Freelancer BYO & customer LLM)
- LLM integration to Trados Enterprise
- AI Copilot - natural language interaction with knowledge & data

Dealing with technical transition

- Successful migrations to Trados from legacy products in line with projections
 - 105 to date
 - No adverse impact to YoY attrition

The future - Trados and AI

Q1 FY24

- **Further** AI features iterating Generative Translation Engines and Trados copilot
 - **Delivering** via responsible use of LLMs for customer data
- **Thought leadership** through 15+ accepted conference presentation submissions
- **Subscription** platform launch for Self Service access to Trados

Beyond

- **Expand** into machine-first video localisation
- **Partner** to add software localisation capabilities
- **Add** AI features for further use cases
- **Continue Transition journey** to bring customers onto latest platform



Trados - key takeaways

**Successfully
migrating
clients towards
latest
technology
platform**

**Maintaining
market
leadership**

**Clear roadmap
to incorporate
LLMs & more
AI-centred
features**

**Trados retains
pivotal role in
localization in
an AI-driven
world
combining
HI + AI**

RWS Content Technology

Alex Abey
General Manager

Session overview

**Portfolio and
category
overview**

**In-depth
customer use
case**

**Market
perspective**

**AI and the
future**

Content Technology portfolio



Content

Business-critical information
produced by organisations

Technology

Enterprise software

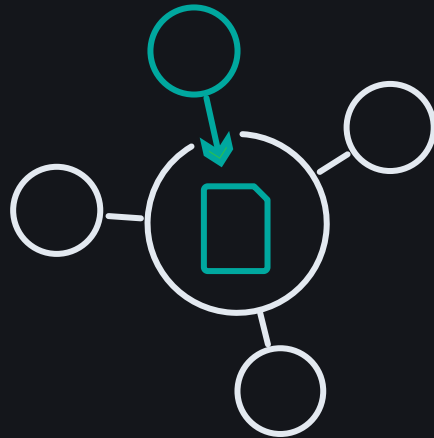
Our category: component content management

Author



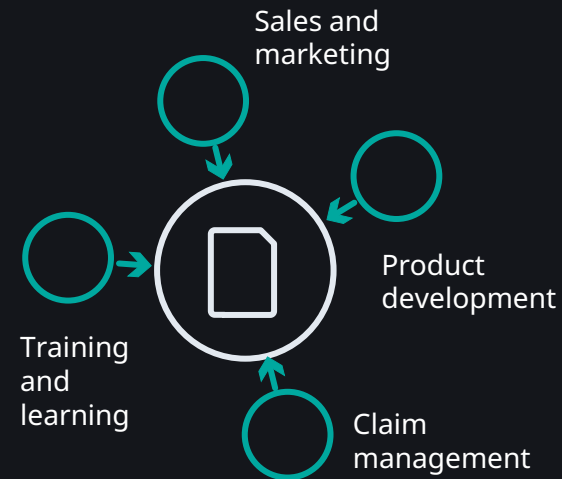
Modular content

Manage



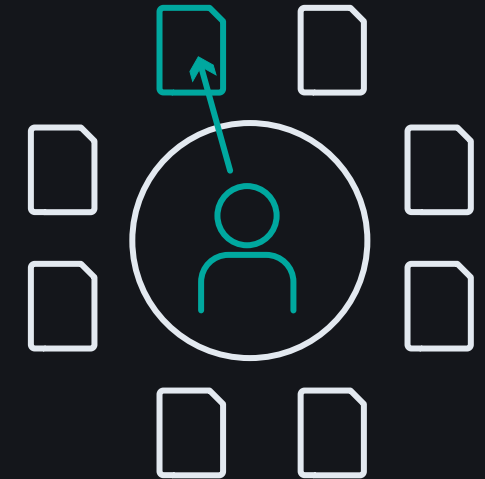
Stored centrally

Collaborate



Accessible to all departments

Publish



Omnichannel publishing

What are content components?

component

component

component

Learning About Different Types of Health Plans

When you understand the different types of Medicare Advantage plans, you can be sure to pick the one that is best for you.

Here are general descriptions about different health plans:

HMO

Health Maintenance Organizations (HMO) plans

In an HMO plan, you have to choose a primary care physician in our network. If you need a specialist, the PCP will choose one who is also in our network.

HMO POS

Health Maintenance Organizations Point of Service (HMO POS) plans

HMO POS plan members have a selection of providers available to them, where they may choose to see providers in or out of network. But you should remember that going outside of our network means you likely will pay more for that service. If a specialist is needed, the PCP will choose one who is also in our network.

PPO

Preferred Provider Organization (PPO) plans

PPO plans are similar to HMO plans, but with great flexibility. In a PPO plan, you don't need to choose a PCP, and you don't need a referral to see a specialist.

PFFS

Private Fee-for-Service (PFFS) plans

A PFFS plan offers a fixed price that it will pay healthcare providers and facilities, such as a hospital. As a member, you must be sure your healthcare providers accept a PFFS payment.

PDP

Prescription Drug Plans (PDP)

Also known as Medicare Part D, PDPs are standalone plans which add prescription drug coverage to Original Medicare and some Medicare Advantage plans.

Be sure to see the Summary of Benefits in this booklet for details on the specific additional benefits in each plan.

Documents



Components



Why content components?

Write once

Reuse many times

Omnichannel publish

Full audit trail

What kind of content?

High value

Hero marketing content, reports, corporate communications

Content ideally suited to component content management

LLMs as co-pilots

Low value

Social content, email, outbound marketing content

Static documentation

LLMs as substitute technology

Transient

Persistent

Video

Use Case:

Large EV manufacturer

Owner's Manual

Choose your locale:

North America

[English \(United States/Canada\)](#)
[Français \(Canada\)](#)
[Español \(Mexico\)](#)
[Deutsch \(United States/Canada\)](#)
[Français \(United States\)](#)
[Italiano \(United States/Canada\)](#)
[日本語 \(United States/Canada\)](#)
[한국어 \(United States/Canada\)](#)
[Nederlands \(United States/Canada\)](#)
[Svenska \(United States/Canada\)](#)
[简体中文 \(United States/Canada\)](#)
[繁體中文 - Hong Kong \(United States/Canada\)](#)
[繁體中文 - Taiwan \(United States/Canada\)](#)

Europe

[Català \(Catalan\)](#)
[Español \(Spain\)](#)
[Hrvatski \(Croatia\)](#)
[Čeština \(Czech Republic\)](#)
[Dansk \(Denmark\)](#)
[Nederlands \(Netherlands\)](#)
[Nederlands \(Belgium\)](#)
[Français \(Belgium\)](#)
[Suomi \(Finland\)](#)
[Français \(France\)](#)
[Italiano \(Italy\)](#)
[Deutsch \(Germany\)](#)
[Deutsch \(Austria\)](#)
[Ελληνικά \(Greece\)](#)
[Français \(Switzerland\)](#)
[Deutsch \(Switzerland\)](#)
[Italiano \(Switzerland\)](#)
[English \(Europe\)](#)
[English \(United Kingdom\)](#)
[English \(Ireland\)](#)
[English \(Iceland\)](#)
[Magyar \(Hungary\)](#)
[Norsk \(bokmål\) \(Norway\)](#)
[Polski \(Poland\)](#)
[Français \(Luxembourg\)](#)
[Deutsch \(Luxembourg\)](#)
[Português \(Portugal\)](#)
[Română \(Romania\)](#)
[Slovenščina \(Slovenia\)](#)
[Svenska \(Sweden\)](#)

APAC

[简体中文 \(Mainland China\)](#)
[English \(Mainland China\)](#)
[繁體中文 \(Macau\)](#)
[English \(Macau\)](#)
[日本語 \(Japan\)](#)
[English \(Japan\)](#)
[繁體中文 \(Taiwan\)](#)
[English \(Taiwan\)](#)
[한국어 \(Korea\)](#)
[English \(Korea\)](#)

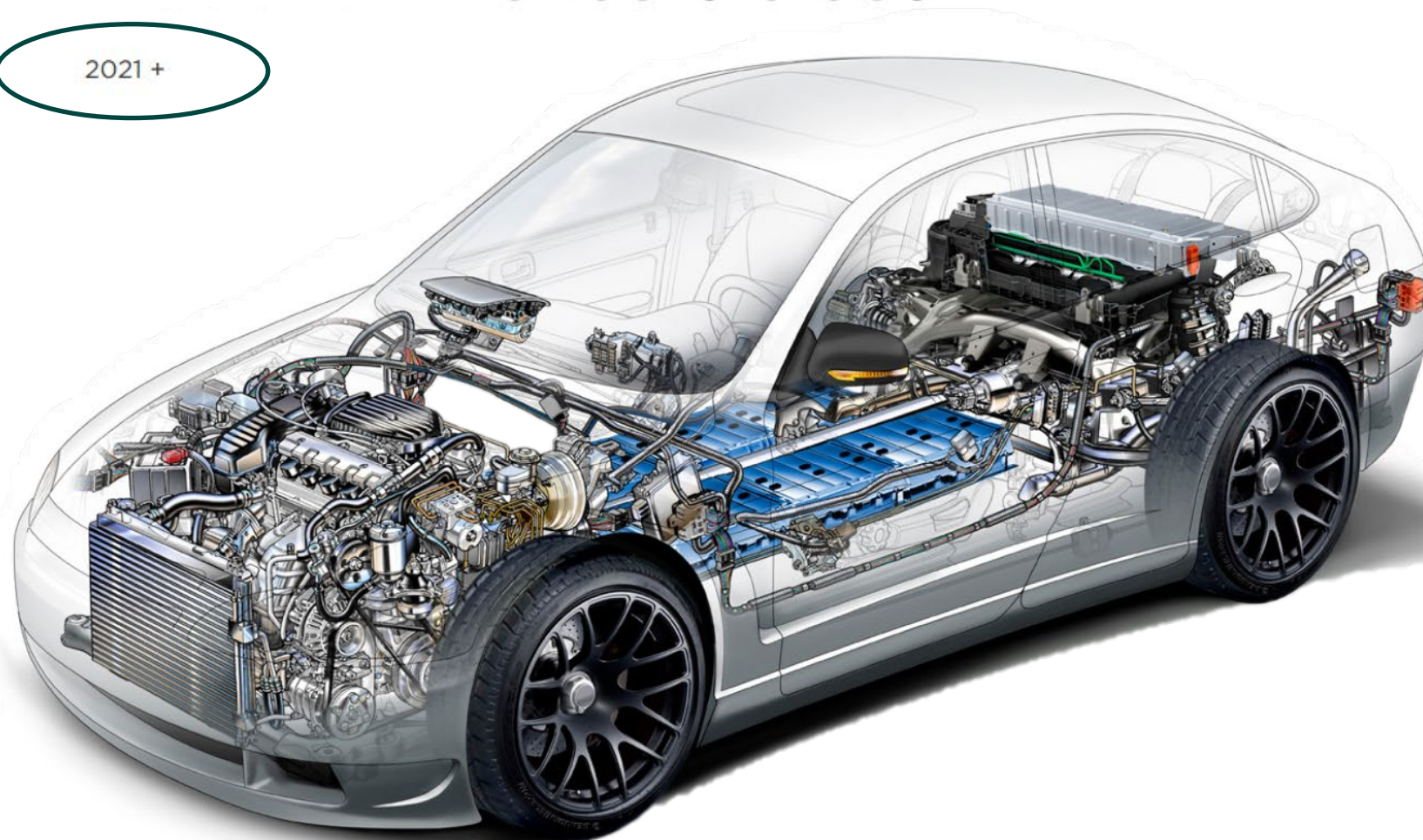
Middle East

[عربي \(U.A.E.\)](#)
[English \(U.A.E.\)](#)
[عربي \(Jordan\)](#)
[English \(Jordan\)](#)
[עברית \(Israel\)](#)
[عربي \(Israel\)](#)
[English \(Israel\)](#)

- ✓ **Manuale d'uso**
 - Utilizzo del presente manuale d'uso
- ✓ Panoramica
- ✓ Apertura e chiusura
- ✓ Vani portaoggetti
- ✓ Sedili e sistemi di ritenuta
- ✓ Connettività
- ✓ Guida
- ✓ Autopilot
- ✓ Funzioni di sicurezza attiva
- ✓ Dashcam, sentinella e sicurezza
- ✓ Climatizzatore
- ✓ Navigazione e intrattenimento
- ✓ Ricarica e consumo energetico
- ✓ Manutenzione
- ✓ Specifiche
- ✓ Assistenza stradale
- ✓ Risoluzione dei problemi
- ✓ Informazioni per l'utente

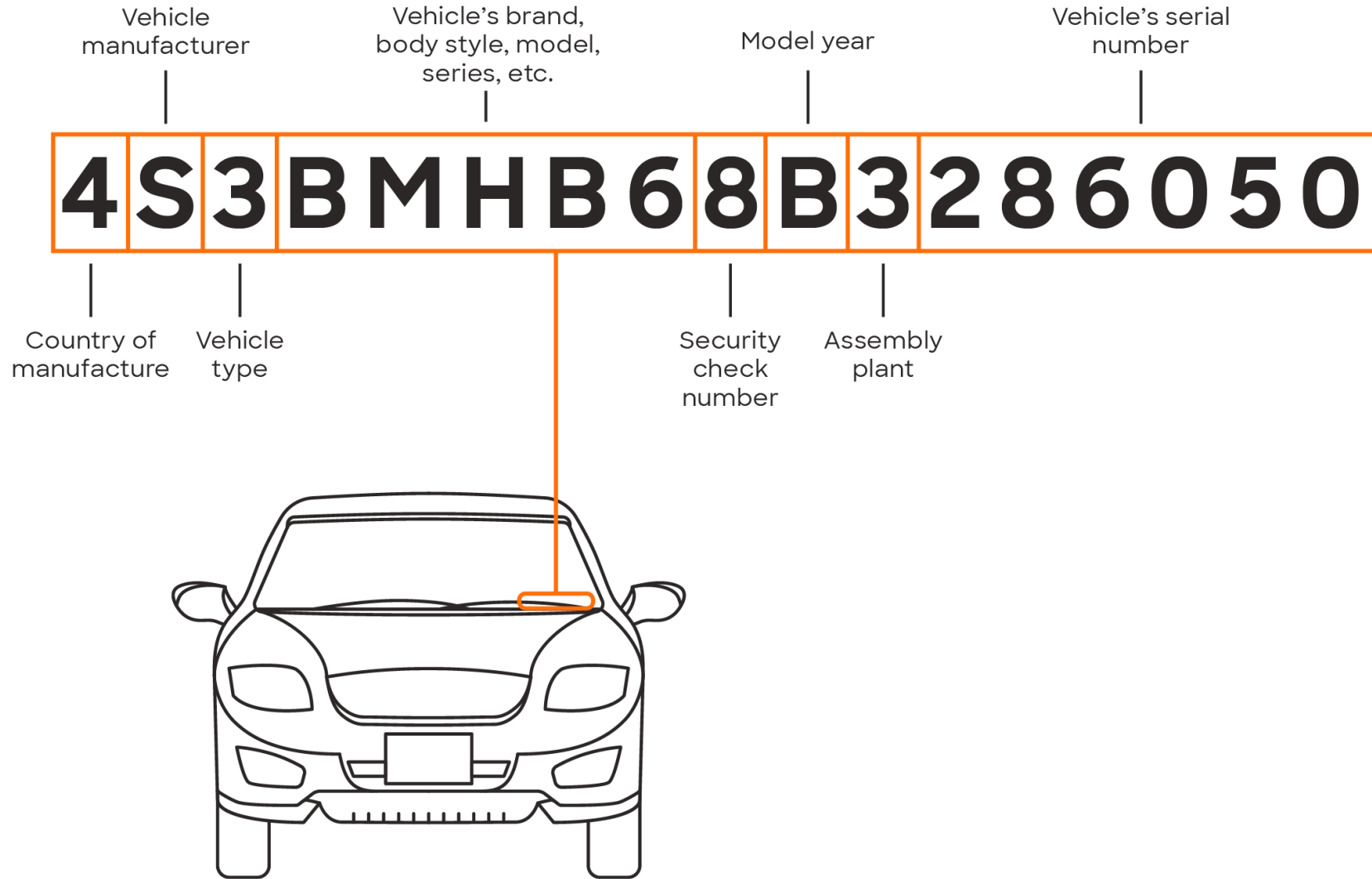
Manuale d'uso

2021 +



Versione software: 2023.26

North America



Reuse

Consistency



Customer support and aftermarket service

Customised repair manuals and instructions



Employee training and dealership experience



Brochures and collateral





AVAILABLE IN 2 WEEKS

Air Pure

Lease at \$749/mo. ⓘ

Buy at \$83,975²

*Destination and documentation fees included

Max Power 0-60 mph
480 hp 3.8 sec

EPA-est. range¹ Model Year
410 mi 2023

- Dual Motor, All-Wheel Drive
- Stellar White Color
- Mojave PurLuxe with Alcantara Headliner Interior
- 19" Aero Range Wheels
- Platinum Appearance
- Metal Roof
- DreamDrive
- Surreal Sound



AVAILABLE IN 2 WEEKS

Air Pure

Lease at \$749/mo. ⓘ

Buy at \$83,975²

*Destination and documentation fees included

Max Power 0-60 mph
480 hp 3.8 sec

EPA-est. range¹ Model Year
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- Dual Motor, All-Wheel Drive
- Infinite Black Color
- Mojave PurLuxe with Alcantara Headliner Interior
- 19" Aero Range Wheels
- Platinum Appearance
- Metal Roof
- DreamDrive
- Surreal Sound



AVAILABLE NOW

Air Pure

Lease at \$760/mo. ⓘ

Buy at \$84,775²

*Destination and documentation fees included

Max Power 0-60 mph
480 hp 3.8 sec

EPA-est. range¹ Model Year
410 mi 2023

- Dual Motor, All-Wheel Drive
- Zenith Red Color
- Mojave PurLuxe with Alcantara Headliner Interior
- 19" Aero Range Wheels
- Platinum Appearance
- Metal Roof
- DreamDrive
- Surreal Sound

Web and mobile



你好！小P，导航回家。

你好！小P，快进十秒。

你好！小P，打开空调。

你好！小P，空调25度，寻找充电站。

你好！小P，打开个人中心。

In-vehicle digital experience

Consumer protection
Autonomous vehicle

Across jurisdictions



Legal and regulatory submissions

Cars as software: updates = updated content



**And do all of this in
multiple languages**

Tridion + Trados + Services

Client need

Process efficiency

Gives organisations a full solution to author, manage & publish their content

Create once, use multiple times

User experience

Allows content to be made accessible to the right person, at the right time, in the right medium & in the right context

Assurance

Helps maintain compliance

Supports auditable chain of custody

Growth segments beyond manufacturing

Life Sciences



Financial Services



Hospitality & Franchise



Audit & Accounting

Deloitte.

Standards & Publishing



RWS Content Technology portfolio

Use cases	Rule makers and rule takers	Technical and regulated content	Structured content authoring	Aerospace & Defence
Products	Propylon	Tridion	Fonto	Contenta
Focus	Integrate & grow	Continue cloud-first journey & grow	Grow in Pharma	Grow international markets

RWS right to win



Tridion

Established brands

Major segments addressed, with minimal overlap

Vertical-specific solutions and focus

Tailored solutions for key markets like Pharma

End-2-End solution

Integration with localisation technology & services

LLM integration video

Key takeaways

**Multi-product
portfolio
serves all
client
segments**

**AI as co-pilot
drives
efficiency &
productivity**

**Targeting
vertical use
cases beyond
traditional
documentation**

**Cloud-first
product
roadmap will
allow
mid-market
growth**

Panel Q&A

Welcome back

Ian El-Mokadem




Orientation – we will explore each of these areas

Backed by longstanding experience & expertise, RWS already able to support clients through their AI journey


PRODUCTS & SOLUTIONS

EXPLORING AI

Tech Services 

Choose the right AI strategies and tools

BUILDING AI


TrainAI 

Train your AI with dependable, responsible data

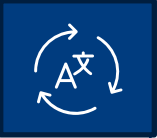
Language Weaver 

Build a secure linguistic AI platform, tailored for your business


USING AI

Language Weaver 

Understand content in any language, instantly


Trados 

Deliver translation projects smarter and faster

Structured Content Management 

Author, manage, collaborate, publish

INTERNAL DEPLOYMENT

Language eXperience Delivery (LXD) 

Extend use of AI beyond machine translation and content analysis; improve productivity & automation

**TrainAI / data
services**

Vasagi Kothandapani

**Senior Vice President,
Strategic Accounts &
TrainAI**



Every day many of us...

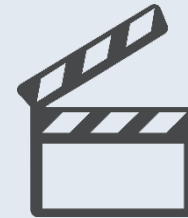
Check our
Social Media
feed



Use Maps
to find
our way



Watch a
movie
recommendation



Type an email
using suggested
text



All of these are examples of AI
How does AI learn? It needs vast amounts of data

But what if the wrong data is used to train AI?

This example might be funny

**AI says it's
a chihuahua.**



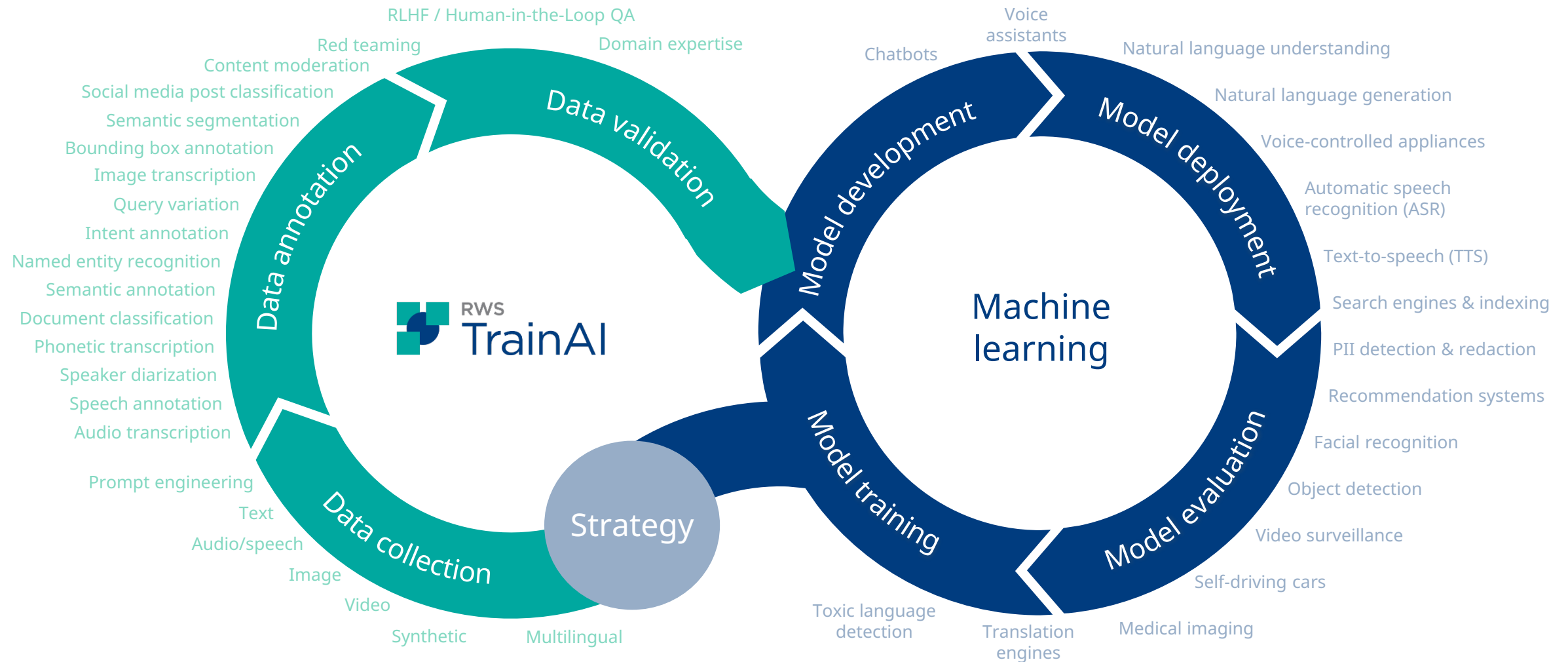
but using incorrect data can have serious consequences

**AI says there's
a threat.**



**This is where TrainAI by RWS comes in –
we provide clients with responsible AI training data**

TrainAI provides a broad range of data services...



...including services to train and fine-tune generative AI



Domain expertise

- Subject-matter experts across a broad range of topics and educational levels
- SmartSource AI community of 100k+ vetted, qualified members



Data/content creation

- Prompt engineering (prompt-response pairs)
- Data collection, content generation, data annotation (text, audio/speech, image, video, synthetic, multilingual data)



RLHF

(reinforcement learning from human feedback)

- Response rating, evaluation, and editing
- Fact extraction and verification
- Content moderation



Risk mitigation

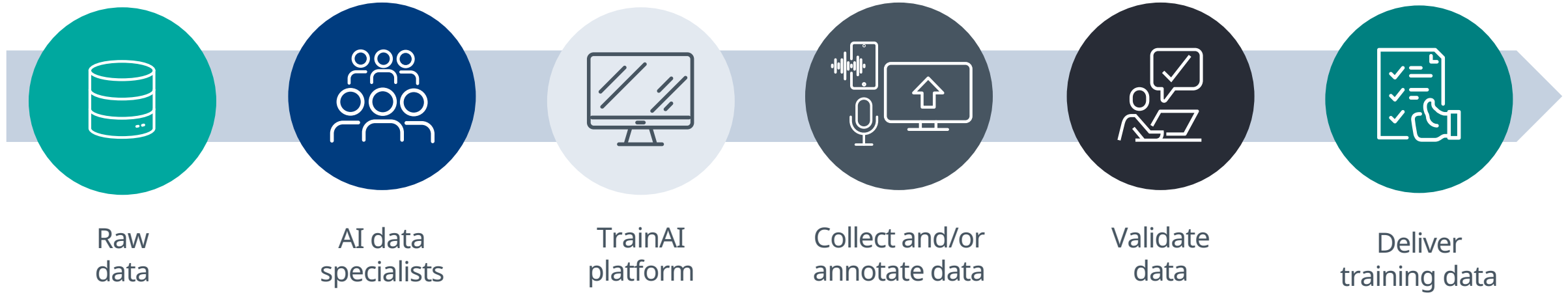
- Red teaming or jailbreaking to uncover vulnerabilities in the model (Create prompts that cause the model to hallucinate or generate potentially harmful content)



Language support

- Locale-specific content or data
- Language testing to improve language capabilities of the model

Here's the process



SmartSource AI community of 100,000+ annotators, linguists, researchers, covering 400+ language variants across 175+ countries

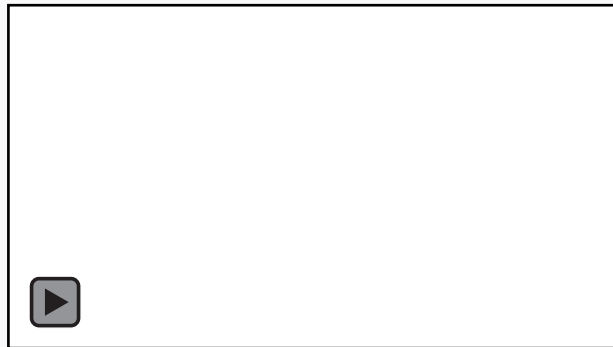
What does data collection look like?

Collection of text, audio, image, video data

Intent variations

Speaker, go
Speaker, turn on
Speaker begin
Speaker play
Turn on speaker
Turn speaker on
Start speaker
Speaker, start

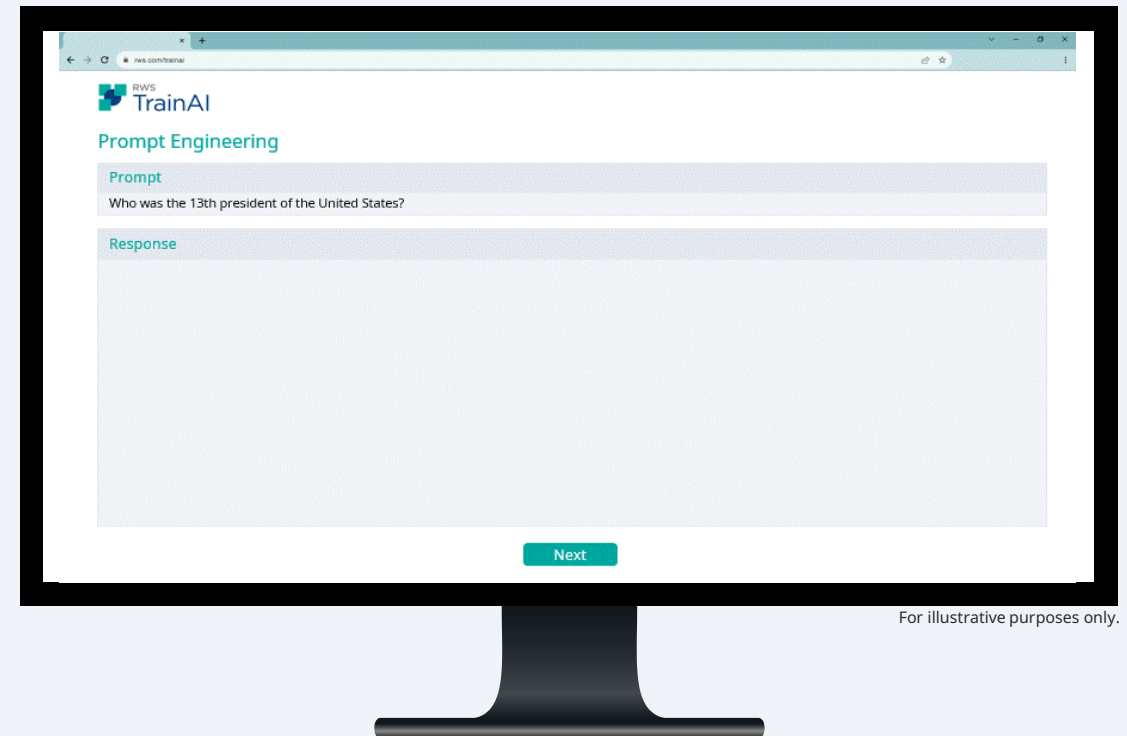
Audio/speech recordings



Images/videos



Prompt engineering



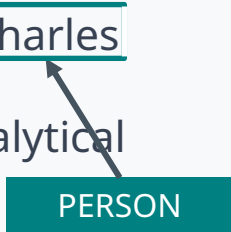
For illustrative purposes only.

What does data annotation look like?

Text annotation



was the first computer programmer, noted for her work on Charles Babbage's Analytical Engine.



Audio annotation

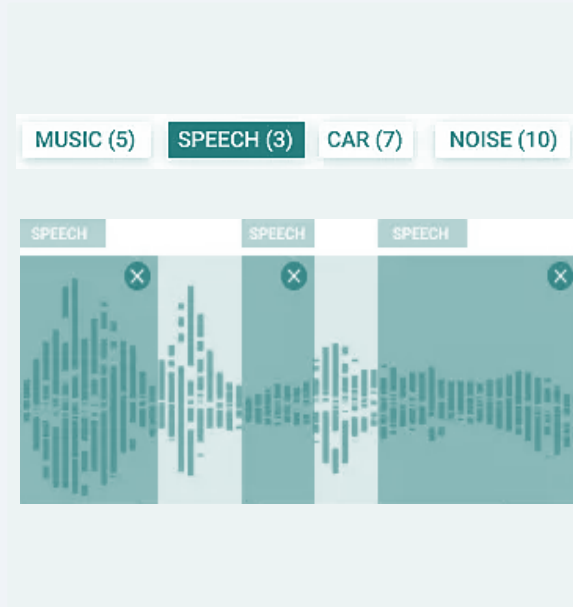
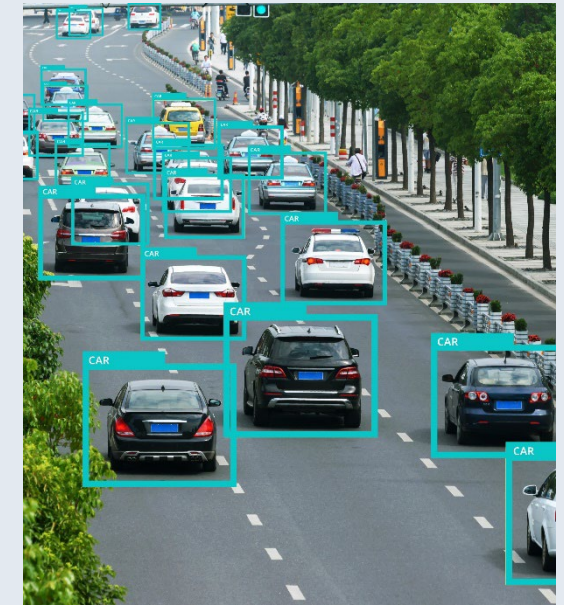


Image annotation



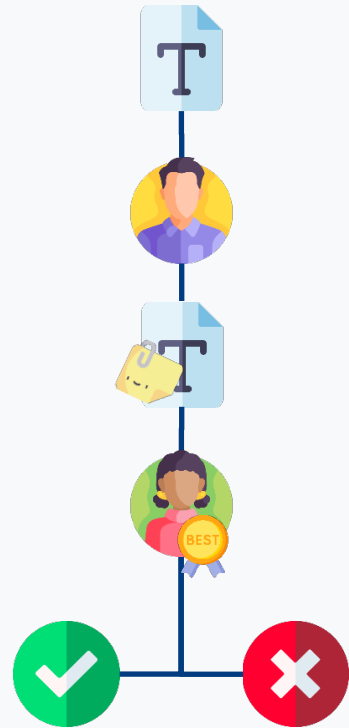
Video annotation



What does data validation look like?

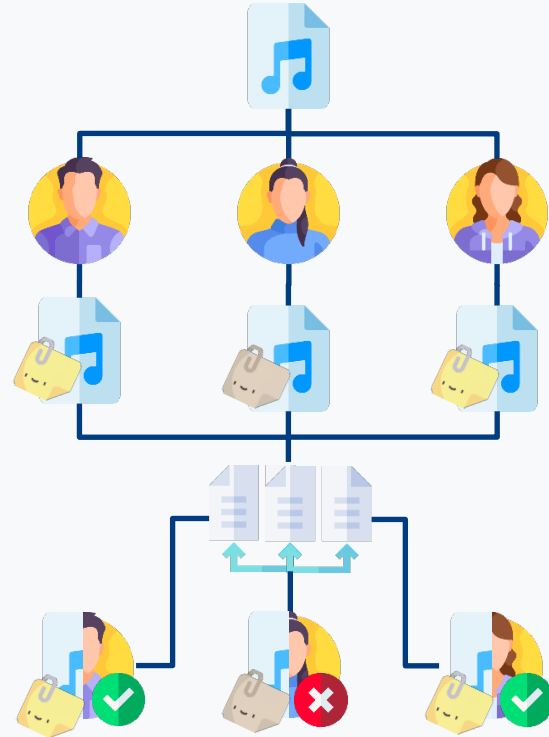
Human-in-the-loop data QA

Individual review



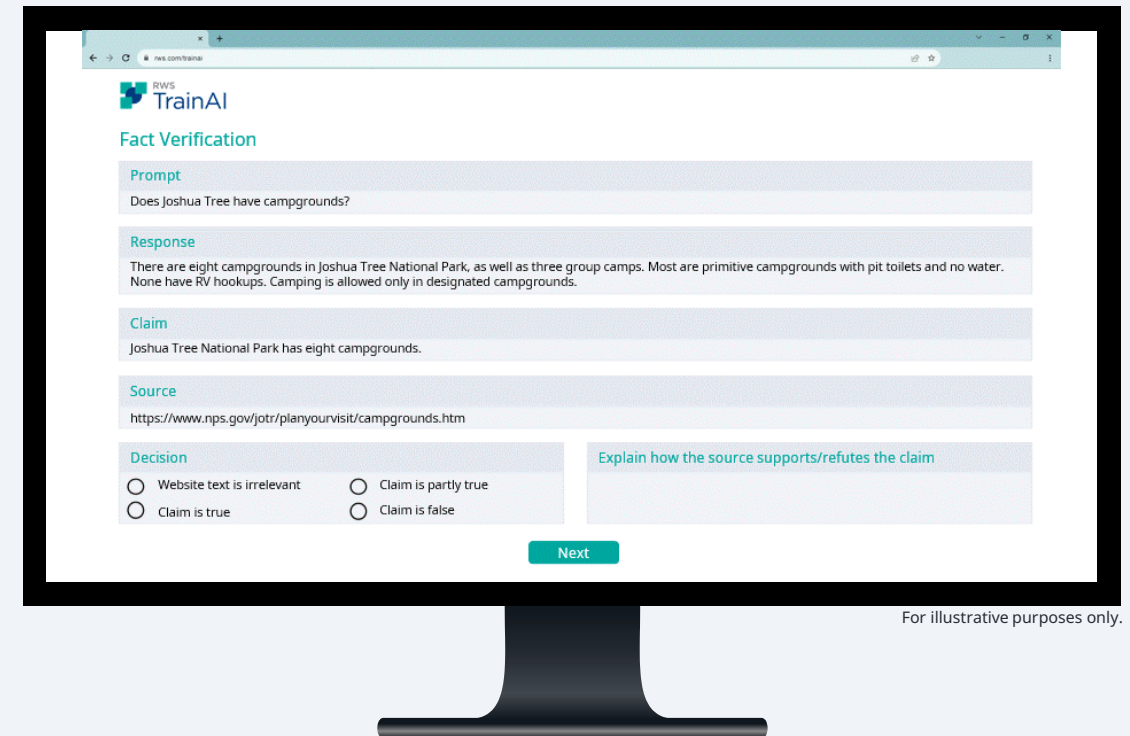
Rater's annotation manually checked by an expert

Consensus review



Raters annotate same data point, and annotations are compared

Response QA, content moderation, fact verification, red teaming



For illustrative purposes only.

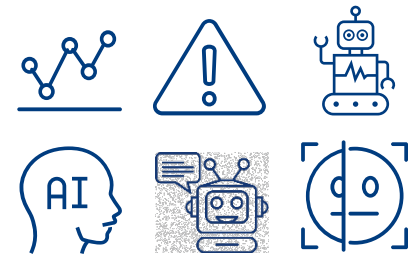
TrainAI fulfils client needs for reliable AI training data

AI helps organisations deliver more efficient, tailored user experiences to their customers and users



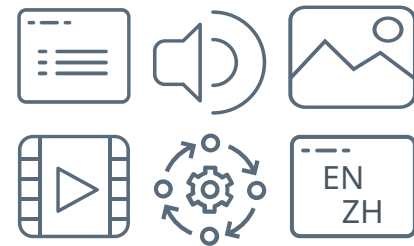
- Efficiency and productivity gains
- Improved speed of business
- New capabilities
- Business model expansion
- Increased profitability
- Greater innovation

Organisations are increasingly deploying AI to better engage with their customers and users

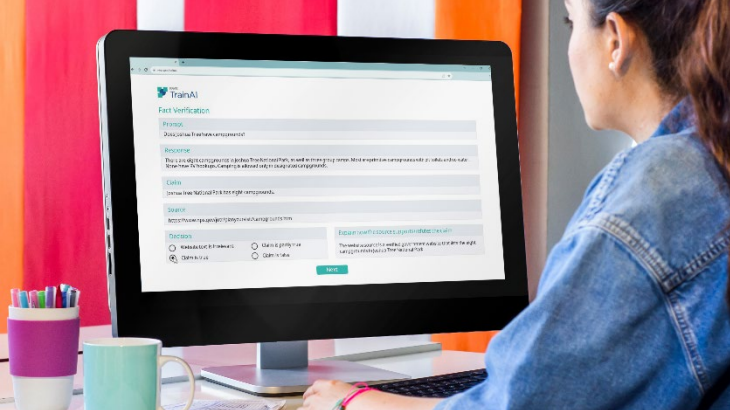


- Chatbots
- Voice-activated assistants
- Facial recognition systems
- Predictive analytics
- Risk management
- Knowledge creation
- Research and development

AI models need vast amounts of accurate and reliable data to learn from on a continuous basis



- Prompts and responses
- Text
- Audio/speech
- Image
- Video
- Synthetic
- Locale-specific



Big tech fine-tunes generative AI with 200 TrainAI domain experts



Client Objectives

- Boost LLM usability with domain expertise
- Improve model safety
- Differentiate LLM from the rest

Client Challenges

- Access to domain experts
- Ability to quickly scale up, train, and manage experts
- Flexibility to pivot to new tasks as needed

TrainAI solution

Deliver the following based on responsible AI principles:

- **Recruiting and training** as project scope evolves
- **Secure infrastructure** to prevent data breaches and respect data privacy
- **Prompt-response QA** on model outputs
- **Red teaming** to uncover model vulnerabilities
- **Ad improvement** by rating ad relevance
- **Plugin annotations** to ensure safety of content

Results

- Tight **4-week project ramp-up**
- **200+ domain experts** recruited and trained
- **32,000+ hours of work** completed in 3 months
- Supported **rollout of latest version of LLM**
- Awarded **2 additional data services projects**

TrainAI has a compelling right to win



Established capability

100,000+ strong community of AI data specialists covering 400+ language variants and 175+ countries

Longstanding experience and reputation

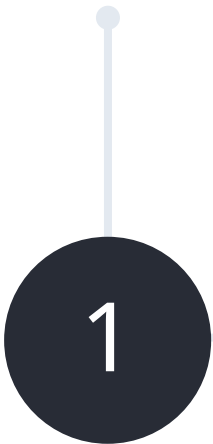
We have been supporting major technology firms for 10+ years

Familiar route to an unsaturated market

Natural demand from existing clients diversified across industries, with shorter sales cycles

Productising TrainAI

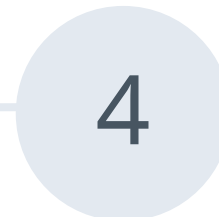
Early 2022
Commitment to Data
Services Growth
Opportunity



Feb 28, 2023
TrainAI brand
officially launched

Apr-Sept, 2023
GenAI service offering developed

- Prompt engineering
- Reinforcement learning from human feedback (RLHF)
- Domain expertise
- Language support



May-Sept, 2023
Key projects won

- GenAI model fine-tuning
- Data annotation and rating
- Search relevance

Ongoing
Dedicated marketing initiatives

- Demand generation
- Cross-sell/ upsell campaigns
- Sales support



Ongoing Technology platform build

- Multiple product releases in progress

Future developments

Go to market with GenAI launch and service extension

- Launch GenAI service offering in early 2024
- Grow business with industry-specific offerings
- Continue to build the TrainAI brand

Campaign teaser: sample ad and social media post.



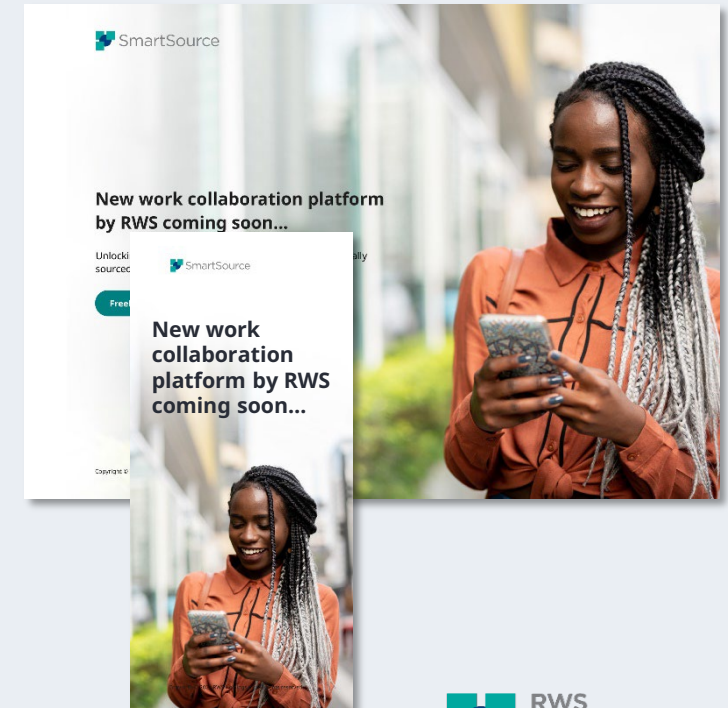
Solidify TrainAI operational model

- Enhance service delivery with AI data services industry expertise
- Constant evolution / improvement

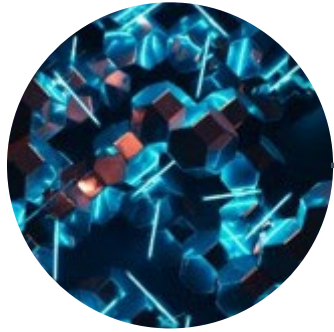


Enhance TrainAI technology platform

- Continue to improve platform tools to drive greater automation
- SmartSource and PM tools



Key takeaways



Experience and capabilities

Significant experience & proven capabilities - platform and community



Strong market growth

A high-growth industry with ready access to clients who are investing heavily



Nimble and responsive

Ability to respond quickly to meet client needs



Revenue opportunities

Opportunity to grow new revenue streams beyond localisation

Internal AI deployment

Maria Schnell

**Chief Language
Officer**



Session overview

LXD - RWS's
production
platform

Localisation
workflow

Efficiency
opportunity

Consequences
for linguists

Linguists
differentiate
us

Language eXperience Delivery (LXD) - production platform

Much more than translation...

- DTP
- Engineering
- Testing
- Validation
- Data services
- Transcreation



Much more than text-to-text...

- Image
- Multimedia
- Voice – human & synthetic
- Digital Avatars



Global market coverage

- 34 countries across 5 continents with office presence
- 159 - countries our in-house & freelance network located in



Expertise & capability

- 29,000 freelancers
- 1,600 in-house linguists
- 429 language pairs & variants covered



Performance and trends



24hrs Av. turnaround time/project

1.9bn Words translated

1m Projects completed

2022

63% Content going into LXD pre-translated by MT

Made up of: **68%** of Language Services revenue
60% of RI revenue

LXD is already AI-dominant



Follow the sun

Increased demand for 24hr support

Language mix changing

Increased demand for rarer languages with no local presence – Africa, SE Asia, Baltics, Hebrew

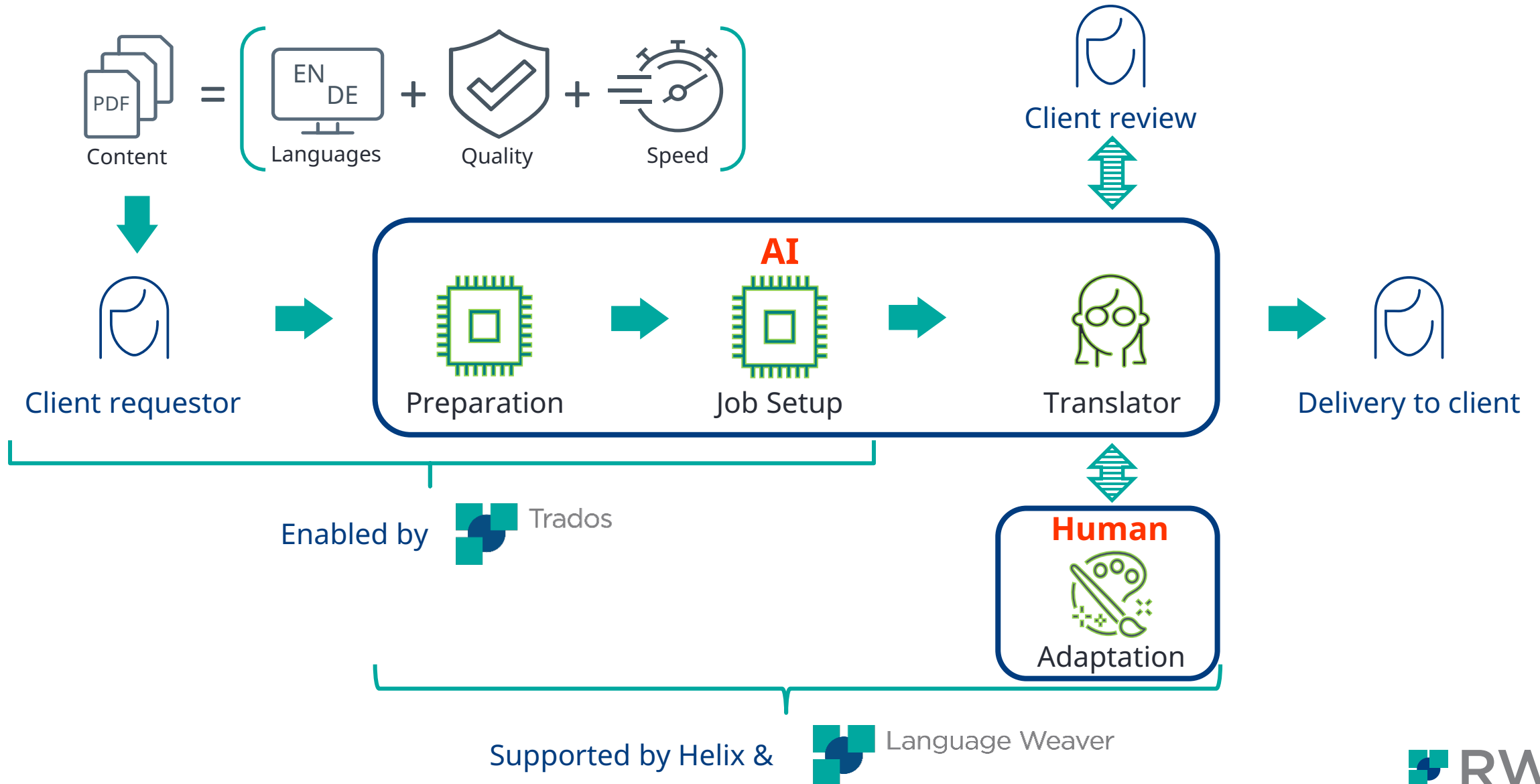
Specialist human expertise – unsuited to MT

Growth in non-linguistic services

60% demand increase for functional testing, audio-video production since 2020

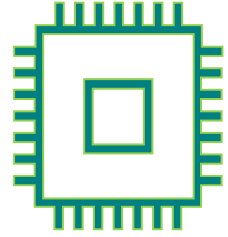
Specialist human expertise – hourly billing, not per word

Workflow - machine-first since early days of neural MT

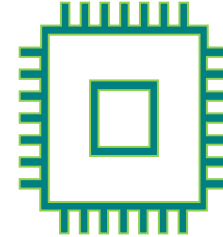


What potential for further automation and productivity gains does AI bring to the LXD?

AI in Pre-Translation Stage



Preparation



Job Setup

What we do today:	What can still be optimised:
Pre-translation from TM	Improve input
NMT Pre-translation	Agile workflows with MTQE
Resource recommendation	
Workflow recommendation	

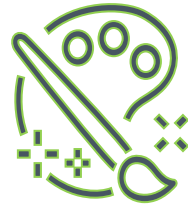
AI in Translation Stage



Translator

What we do today:	What can still be optimised:
Autopropagate	Research
Autosuggest	Quality Assurance

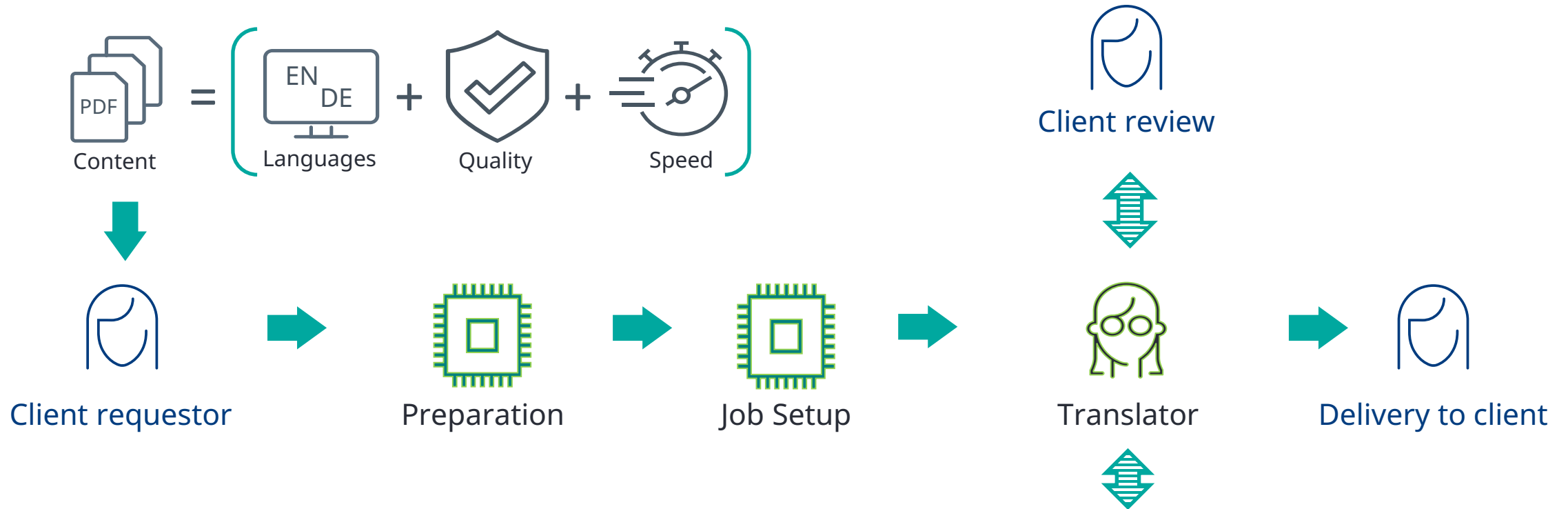
AI in Adaptation Stage



Adaptation

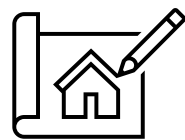
What we do today:	What can still be optimised:
Automatic Speech Recognition	Script translation
Synthetic voice	Voice mixing & cloning
	Automation first layout
	Automation first sub & dub
	Digital avatar
	Testing automation

Complex adaptation - eLearning example

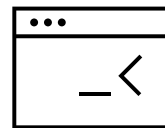


Adaptation

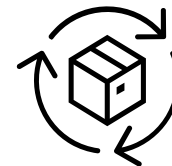
Adaptation stage will include multiple rounds of reassembly and client review



Layout



Voice creation



Reassembly



Testing & Bug Fixing

Adaptation – what we have to bear in mind

Human sentiment:

Distrusting AI-generated content

Ethical concerns: likeness, image & voice

Need for balance between...

...what technology will allow and...

...what humans will accept from AI-generated content

What does this mean for our linguists?

Two localisation pathways have evolved

Translation = Artificial Intelligence

- Source equals target
- Accuracy, consistency, compliance key
- Goal: Risk reduction
- Relevant for:
 - Documentation
 - Post-sales content

Hyperpersonalization = Human Intelligence

- Relevant to target group, market, channel
- Native experiences are key
- Goal: Engagement
- Relevant for:
 - Pre-sales content
 - Audio video content
 - Increasingly, post-sales content

What the future might look like

Artificial Intelligence

- Pre-translate
- Adapt language flavours
- Supercharge:
 - Quality assurance
 - Research
 - Optimising language assets

Human Intelligence

- Fact check & validate
- Transcreate
- Culturally adapt
- Make content accessible
- Optimise AI:
 - Longtail languages
 - Complex processes (audio video, software localisation)

GOODBYE TRANSLATORS

HELLO
LANGUAGE
SPECIALISTS

Key takeaways

Production is increasingly automated

AI already plays critical role to support efficiency

Strong AI opportunity at all stages of production

Growth and efficiency benefits can be unlocked

Translators will become Language Specialists

Closing comments

Ian El-Mokadem



What we shared today

Unpacked RWS's AI / Technology story – past, present & future

**Explained how
AI &
technology are
critical to RWS
& our industry**

**Showcased the
capability &
expertise in AI
& technology
across the
Group**

**Illustrated how
we see AI
contributing to
growth and
efficiency**

**Outlined some
of our future AI
/ technology
developments**

**Met our experts and understood how our products and services position us to
be a beneficiary of developments in AI**

Our core convictions relating to AI in our industry

Essential to adopt AI and play a lead role in shaping its use

While their roles will evolve, humans will continue to play a key role in content transformation

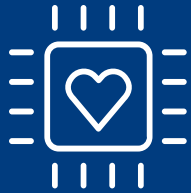
AI will continue to enable further improvements in cost per word and this will be balanced by a significant growth in content and use cases

There is an opportunity for us to be a disruptor and strengthen our competitive position

Partnerships will be important

RWS's right to win

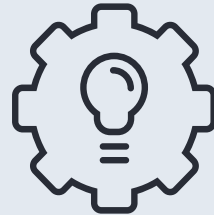
Enterprise-
grade
products



Data
creation &
validation
capability



Deep
expertise



Enviably
client set



Attractive
Partner



We believe RWS is better placed than others in the sector to win

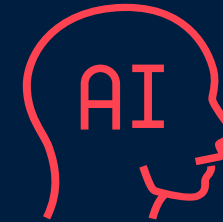
The key ingredients



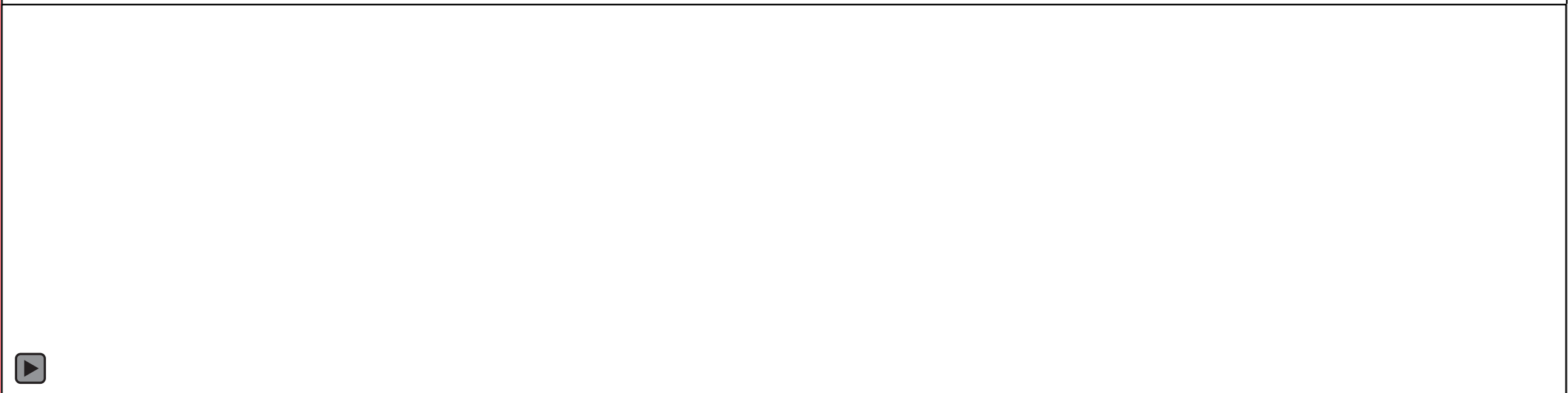
**FOCUS ON CONTENT
TRANSFORMATION**



**LEVERAGE
GLOBAL SCALE
AND REACH
THROUGH LXD**



**EMBRACE
ARTIFICIAL INTELLIGENCE
AND
HUMAN INTELLIGENCE**



Panel Q&A