Beyond the Buzz:
A journey into real value with Generative AI

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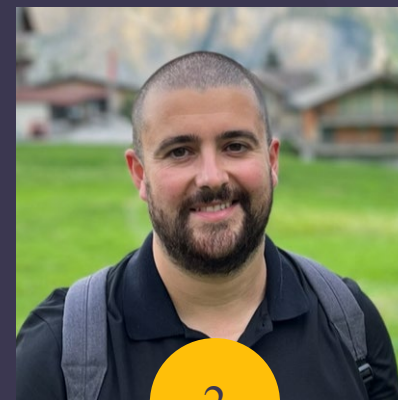
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Who are we?

Benjamin Warren

Amadeus S.A.S

Steven Hayward

Intento, Inc.

DISCLAIMER

What we will cover in this session:

- Why GenAI is important to Amadeus
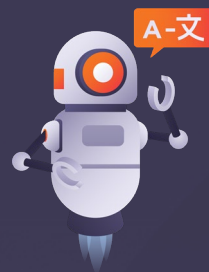- What worked (and didn't!)
- Business outcomes

What we won't cover in this session:

- Deep dive into the methodology
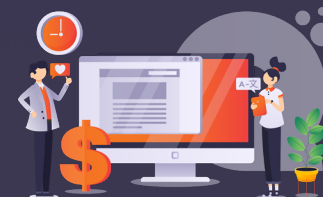- (Deep) Technical findings & analysis

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1

AI at Amadeus

What did AI look like at Amadeus before GenAI and how was the localisation process structured
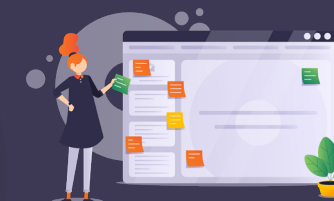
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Why GenAI?

Why did Amadeus consider GenAI and what were the drivers behind introducing it into localisation

3

Project outcomes

What was tested, how the projects went and what were the results

4

Next steps

The process isn't finished yet! What's next on the roadmap

AI at Amadeus

- AI at Amadeus = Machine Translation

- Customised engines using Amadeus data

  - Up to 11 providers at any time

- Orchestration via Intento's Language Hub, integrated in memoQ

  - Translation memories

  - Multiple engine providers

  - Glossaries

  - Some ad hoc NLP pre-processing

Source content → memoQ → Post-editor

Pre-processing + Custom MT Engines + glossaries + post-processing
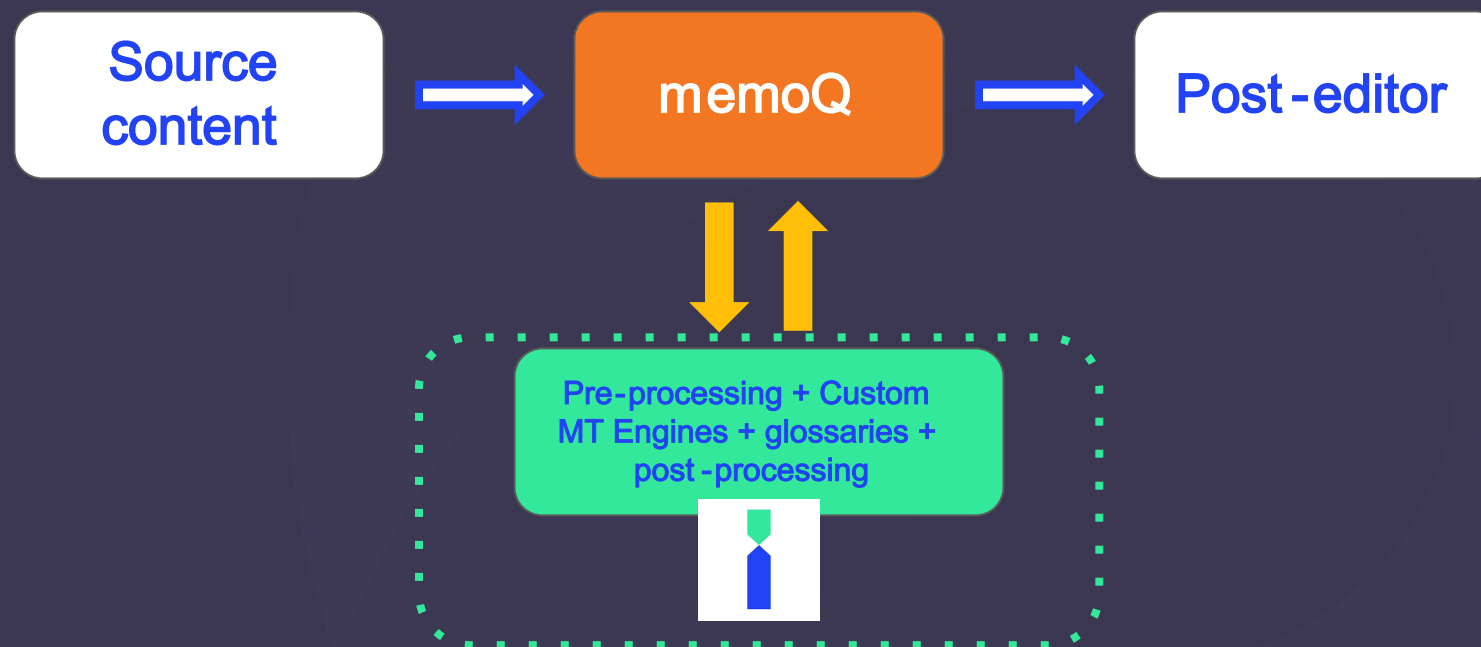
Challenges:
- Scalability linked to human linguist output
- Improvements in engine performance require large amounts of data
- Expansion into new languages was slow

Why GenAI?

- 1/ Management buzz - 'we must use AI'
  - We already were - but we needed to adjust our messaging

- 2/ To be a part of the wider internal conversation
  - Ensure quality was kept at the core of the discussion
  - Maintain the momentum already gained from MT

- 3/ It could actually help us!
  - Could it fill some of the gaps that had already been identified
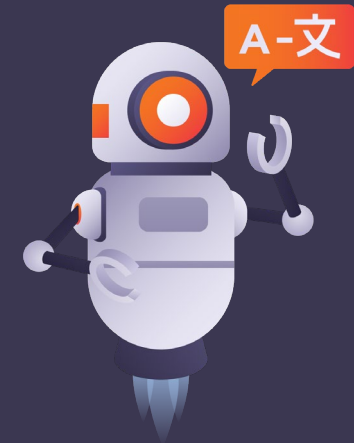
Why this approach to GenAI?

- 1/ It allowed us to focus on the needs and aims of different users
  - Language team want quality output
  - Everyday users want faster output

- 2/ Using Amadeus GenAI, rather than generic GenAI
  - Reinforce the current work done with Intento for MT
  - Enhancing a pre-existing workflow, not building again from scratch

Intento's approach to GenAI

- Focus GenAI usage on enhancing the localisation workflow
  - Issues in source content
  - Automatically post-editing the content

- The Intento Language Hub enabled the workflow management and to wrap these GenAI steps around Machine Translation

- Pre-existing integration with memoQ made it quick and easy to push into production

Source quality improvement
Change incorrect formatting, slang, and language errors before translation.

Machine translation
We help pick the right MT model for each of your languages and tailor it to your terminology and glossary.

Automatic post-editing
Apply your tone of voice, terminology, or other customized language features with generative AI.

1 Cleaning & classification of assets

Preparing and understanding the data, making sure it was suitable for the test purpose and defining the brief

2 Training & Evaluation of GenAI models

Using our pre-existing MT evaluation approach, we set about training and evaluating multiple GenAI models to see which performs best
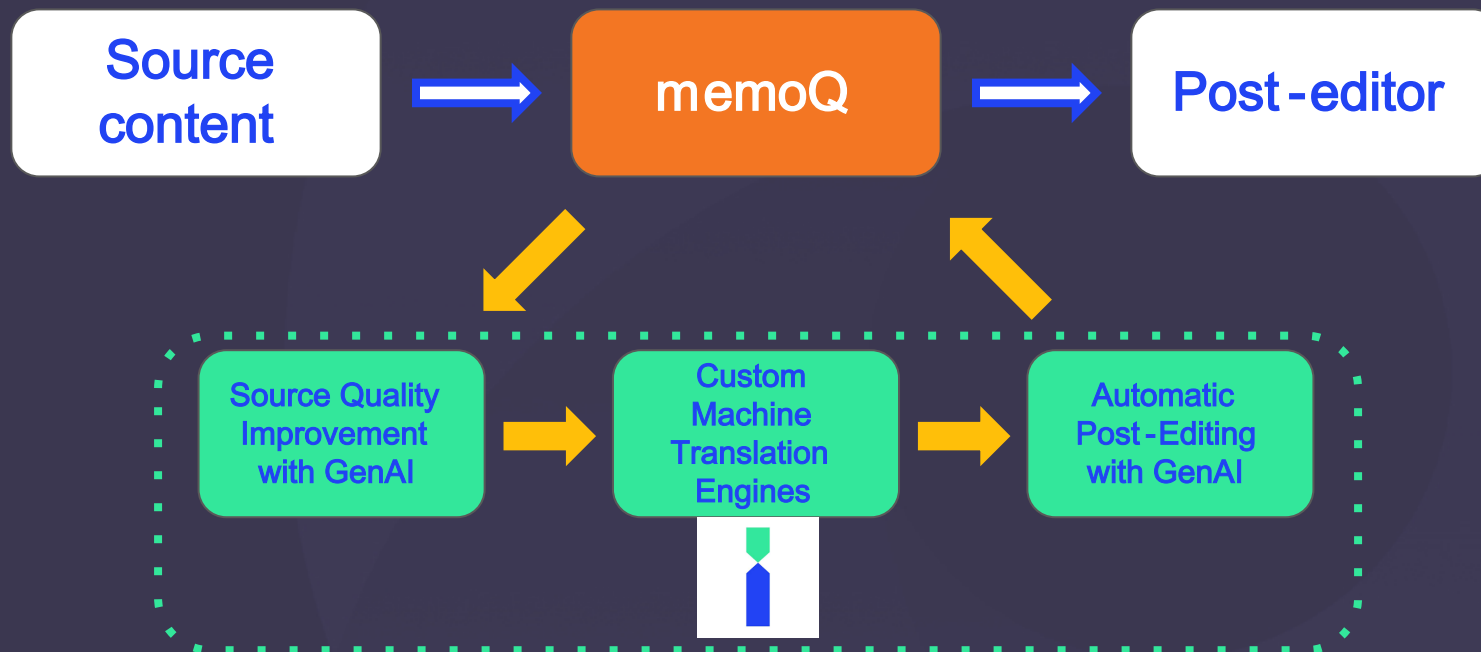
3 End-user feedback

End user sampling was key, to see if the technology was close (or far) from the desired result and to establish if there was any ROI
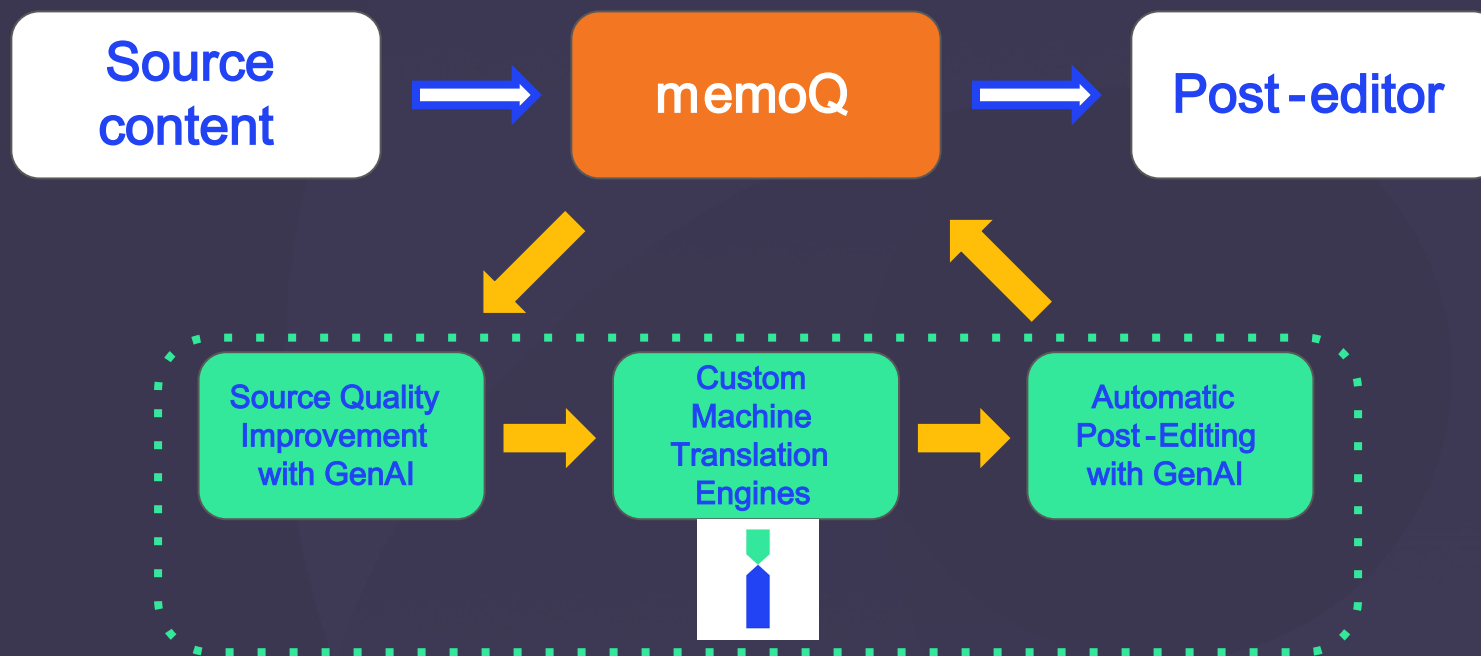
4 Fine-tuning from initial feedback & testing

Using the feedback to put the finishing touches to the model and selecting the best performer to be put into production

2-4 weeks

Source content → memoQ → Post-editor

Source Quality Improvement with GenAI → Custom Machine Translation Engines → Automatic Post-Editing with GenAI

Why Source Quality Improvement (SQI):
- Quality source content is KEY
- Expand editing resource from one FTE
- Changes were precise but repetitive, so it was primed for automation
- It would allow using the existing resources for the most value-add tasks

Why Automatic Post-Editing (APE):
- Develop a comprehensive language strategy
- Prioritise resources by commercial impact for Amadeus
- Focus human resources on key markets & languages
- Edit content previously not touched

Source Quality Improvement

The project

- Using Amadeus writing guidelines and sample documents to train the GenAI engine as an editor
  - Language: English
  - Assets: Style guides, grammar rules, ToV examples, before and after files
  - Files in a range of formats: docx, pptx, pdf

- Two-fold goal:
  - Harmonise content produced from different departments to Amadeus guidelines
  - Enable the MT engine to 'understand' the source content more easily
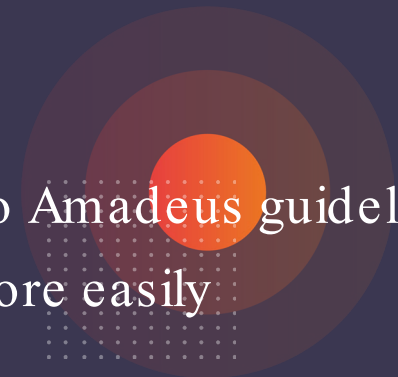
Source Quality Improvement

Challenges

- Rules and guidelines were way too complex, even after shortening
- Relied on human context (unwritten guidelines) to be correct
- Source content format was not very convenient to work with and required manual segmentation
- To include all of the information required, the prompt needed to be very large which created a lack of reliability
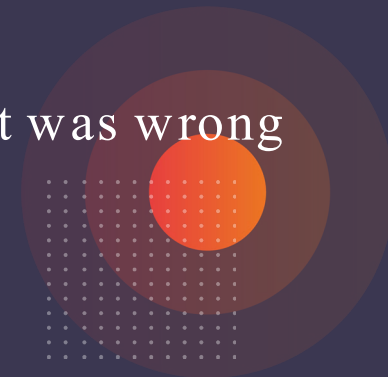
Source Quality Improvement

The outcome

- Changes were not fully following the 'rules'

- Positive impacts created a very small difference

- The quality of the original content was quite high

- We used this to educate other teams on how to understand the impact of GenAI on content

- Pivoted to using it as a writing aid - educating the author on what was wrong

Automatic Post-Editing

The project

- Using previous post-edited content to train the GenAI engine as a post-editor
  - Language: Spanish
  - Content from memoQ
  - Internal human review of results

- Two-fold goal:
  - Enable human post-editors to cover more content from the 8 core languages
  - Automatically post-edit languages that sit outside of the core languages

Automatic Post-Editing

The outcome

- Small Translation metric score change: 1-3% (TER & COMET-QE)

- However, a large impact on linguist editing time

  - After APE, the reviewers would have up to 70% less work

  - The goal is to reduce core languages by 50%

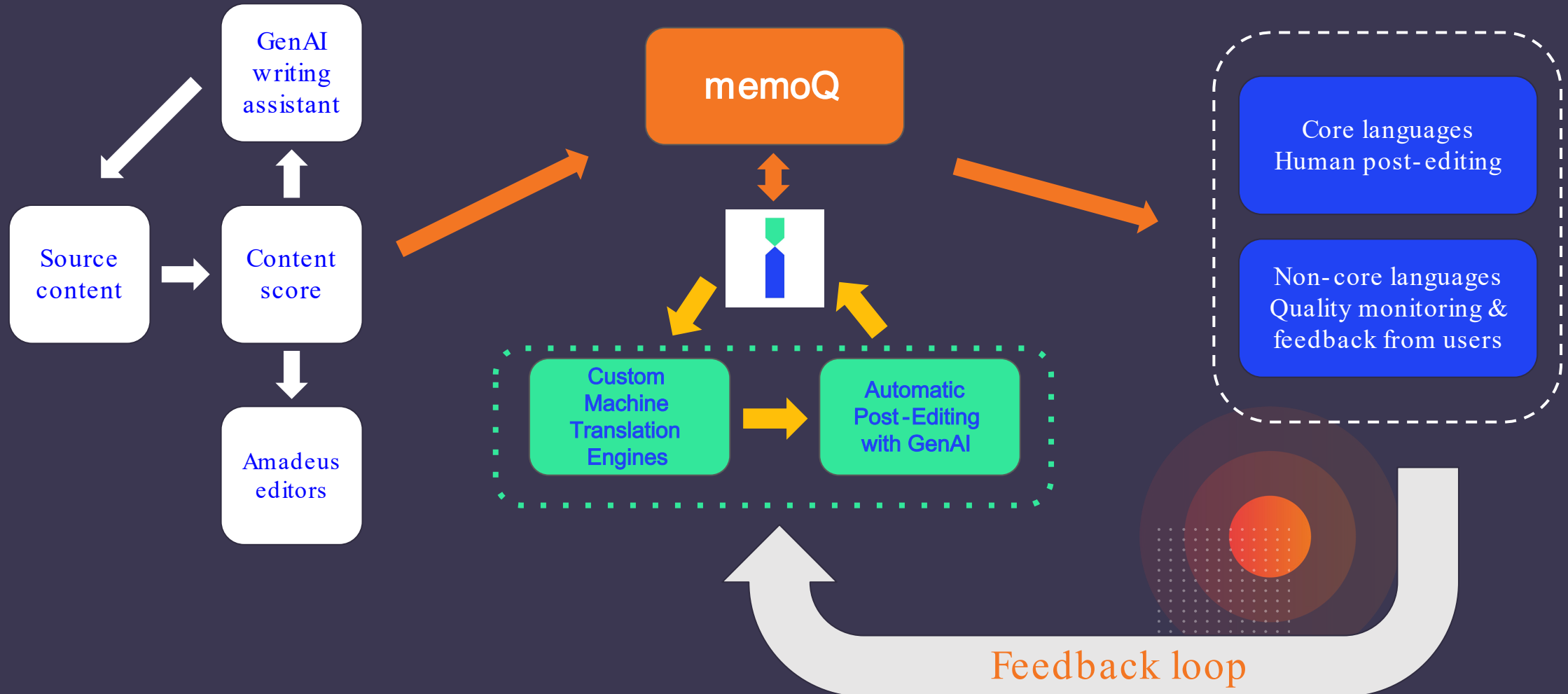- Having the data in memoQ was very important

The results

What did we find?

- GenAI can have an impact on localisation projects

- The story of <u>WHY</u> is just as important (maybe more!)
- Matching the impact with business goals, not just localisation goals

- Impacting pre-existing workflows is very important
- Change management becomes easier when you have clear results

Rolling it out in production

GenAI writing assistant

Source content

Content score

Amadeus editors

memoQ

Custom Machine Translation Engines

Automatic Post-Editing with GenAI

Core languages
Human post-editing

Non-core languages
Quality monitoring & feedback from users

Feedback loop

Thank you!

Any questions?