Journalists as end-users: quality management principles applied to the design process of news automation

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The project

- **Code name:** Quotebot (L’Echo/Mediafin)
- **News automation:** to support daily routines, from financial data to texts & charts
- **Funding:** Google DNI (+ 200k €)
- **Stakeholders:** journalists, service provider, IT
- **Project duration:** 2 years (initially 1 year)
How it works
OUVERTURE - priorité 1

— Bruxelles : 9h
— Indices européens : Bel20, Dax, Cac40, AEX, Footsie, Stoxx 600 : 9h
— Wall Street : 15h30 (ou 14h30 changement d’heure!)

Échantillon de texte : ouverture à la hausse à la bourse de Bruxelles

La Bourse de Bruxelles était bien orientée dans les premiers échanges, avec un indice Bel20 qui gagnait XX au sein de l’indicateur, XX valeurs étaient en hausse, XX inchangée(s) et XX en baisse. Les meilleures progressions étaient à mettre sur le compte de/d’ Valeurs 1 (+XX%), de/d’ Valeurs 2 (+XX%) et de/d’ Valeurs 3 (+XX%). À l’autre bout du spectre, on retrouvait Valeurs 4 (-XX%), Valeurs 5 (-XX%) et Valeurs 6 (-XX%). Hors Bel20, on retiendra les bonds de/d’ Valeurs 7 (XX%), Valeurs 8 (XX%) et Valeurs 9 (XX%), ou encore les pertes encaissées par Valeurs 10 (XX%), Valeurs 11 (XX%) et Valeurs 12 (XX%).

La Bourse de Bruxelles était bien orientée dans les premiers échanges, avec un indice Bel20 qui gagnait 0,72% à 3.913,72 points. Au sein de l’indicateur, 5 valeurs étaient en hausse, 2 inchangée(s) et 13 en baisse. Les meilleures progressions étaient à mettre sur le compte d'AB InBev (+2%), de Solvay (+1,7%) et d'Umicore (+1%). À l’autre bout du spectre, on retrouvait Aegas (-3%), Proximus (-1,9%) et Cofinimmo (-0,82%). Hors Bel20, on retiendra les gains de Mithra (+14%), d'Aedifica (+3%) et de Sapec (+1,7%). À l'opposé, Montea cédait 2%, Ter Beke 1,3% et Curetis 1,2%.
Empirical material

- Participant observations
  (kick-off meeting, 6 workshops, 6 calls)
- 8 semi-directed interviews
  (journalists, project manager, service provider)
- 2 online surveys
- Access to 62 work documents & 129 e-mail exchanges
Analytical framework

- ISO 9000 family (7 principles)
- guidance and tools to meet users’ requirements
- Quality = features and characteristics of a product, a process, or a service that bears on its ability to satisfy needs explicitly or implicitly expressed
- Must be consistently improved
- Risks must be evaluated to be anticipated
#1 Customer focus

Targeting the user experience

- Hedonic and subjective dimension
- Satisfaction assessments: all along the project
- Quantitative: 4 computational linguistics evaluations
- Qualitative: 2 online surveys (anonymous)
Automatic metrics

Based on a corpus of texts written by journalists & automatically generated texts

Tool used: https://journodev.tech/linguistics/
Evaluation based on human judgements

Does Quotebot write like you? 100% “NO”
#2 Leadership

**The sociotechnical mediator**

- Need for a project manager
- Link between journalists & IT people
- Hybrid profile helps
- Anticipate fears & problems

= challenging humans
#3 Engagement of people
Involving end-users

- Journalists as end-users = journalists as designers
- First form of use (appropriation)
- Unexpected additional work
- Learn to deconstruct routines
#4 Process approach

Preventing risks

- Process / computational thinking
- Priorization of improvements
- Risks: data quality, planning management, delays…

= social, technical, organizational and material factors
#5 Improvements

Meet the users’ requirements

- Connected to organizational and operational levels
- Requirements evolved over time
- Continuous improvements of the automated texts
- Slowed down the project, caused an internal crisis
#6 Evidence-based decision making

Speaking the same language

- Assessments all along the process
- Lack of expertise about financial news
- Computational thinking vs journalistic thinking to facilitate dialog and information transmission
#7 Relationship management

Staying tunes to all stakeholders

- Everyone influenced the project
- Different priorities, different tasks
- Required explicit and shared knowledge
LIMITED APPROACH...

- Subjectivity and flexibility of the standards
  Have to be adapted according the project & stakeholders

- Provides a method but does not guarantee quality of the result & end-uses as adoption is never immediate

- Do not necessarily lead to improvements (business performance or innovation)
... BUT...

- Quality management at the centre of the project
- Promoting an inclusive approach (useful guidelines)
- Enable to reach the conditions of appropriation of an innovation
- Social process before being technical

= debunking the myth of a “black box” technology
Thank you for your attention!

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