



# Taming The Thousand-faced Beast: A Very Practical Implementation of Language Quality Assurance service (LQS)

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# The program for today

- Language quality in business
- The science of language quality
- Manual implementations
- LQA OnDemand: Practical implementation
- Results and advantages
- LQA as Business Process Reengineering tool

# Language quality in business

The background features a gradient of blue tones, from a light sky blue at the top to a deep navy blue at the bottom. Overlaid on this are several semi-transparent, overlapping wave-like shapes that create a sense of depth and movement. On the right side, there is a bright, circular light source, possibly representing a sun or moon, which casts a soft glow across the scene.

# Purchasing, project costing business decision factor



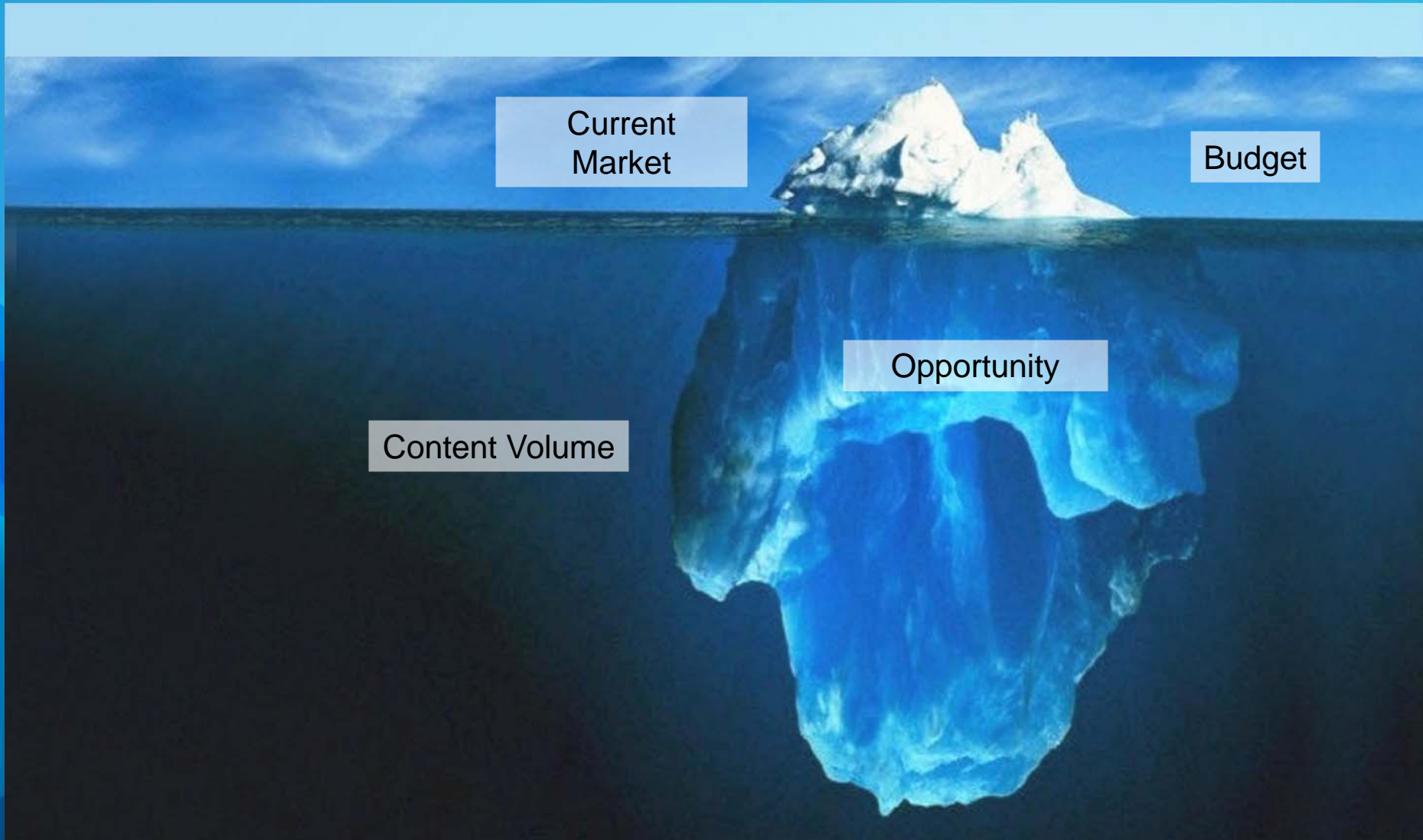
$$\text{Business Decision Metrics} = \frac{\text{Quality}}{\text{Cost} * \text{Time}}$$



# Client Business Problems and Needs

- Want more content translated for less \$\$\$
- Want lower vendor costs and faster turnaround
- Want shorter and simpler service job placement cycle and vendor management costs
- Don't want to debate on language quality – need developed LQ metrics
- Want access to clearly defined, measurable and transparent linguistic services
- Don't want to spend money on building high internal fixed cost of language services
- Want roadmap to continued productivity increase through automation and technology – MT is seen as part of future translation architecture
- Bored of labeling MT output quality as unusable

# Huge volumes are not tackled due to lack of uniform quality / usability definition and measurement



# Language Quality Standard Is Essential facilitator of Automation Deployment

- Varying quality metrics **make translation BP vulnerable, volatile, expensive, complex, immeasurable** (different perceptions and interpretations = high process friction (delays, miscommunication, misunderstanding, project overhaul, valuation errors, disconnect between consumers, clients, vendors and LPs)).
- Lack of LQ standard **degrades LPs labor value, lowers entry barrier to unacceptably low quality, causes noise.**
- Lack of LQ standard **prevents from distinguishing between language service levels**, is an **obstacle measuring product quality.**
- Inability to compare apples vs oranges **makes project costing difficult -> inhibits outsourcing.**
- Lack of LQ standard **prevents BPO development** (e.g. on-demand standardized QA service).
- Lack of LQ standard **slows down adoption of language technology** and **inhibits productivity increase.**

# Language Quality Assessment (LQA) is required – what is it?

- LQA refers to assessing Linguistic Quality of [translated] materials based on:
  - International & industry-wide standards
  - Client's standards, requirements & guidelines, including
    - Approved Terminology & Style Guides
    - Agreed Metrics & Quality Criteria
- LQA is expected to measure  
*exactly how good or bad final materials are:*

**GRADE THE SAMPLE**

# Why LQA is required?

- **Reference point**
  - Implementation of quality metrics vs \$\$ and effort
  - Independent, third-party examination of materials
  - Doesn't take too long, is not too expensive
  - Avoiding costly errors at a fraction of the price
- **Business Tool**
  - Consistent failures might mean something is wrong with the vendor or the process
  - Ability to grade samples reliably may be used as essential process element (PES )
  - Ability to grade samples reliably is important process reengineering tool (seeking more economical vendors)
- **Offsetting/preventing negative effect on quality produced by latest trends in translation**  
***Getting a "Well-Disguised Less" for Less***
  - Declining rates
  - Wider MT Application without due process
  - Vendor consolidation
  - Work fragmentation
  - Extensive mark-up language usage
  - Unlimited recycling

# What LQA Is NOT

- LQA is NOT editing
- “Hybrid” approaches do not work well:
  - LQA & Editing
    - Feedback not getting through, improvements unlikely
  - LQA & Functional Testing
    - Linguists are typically not too good at spotting or analyzing technical bugs, let alone SW configurations
    - Dedicated testers do this better and faster across all languages
  - Translation & LQA in one box (at one vendor)
    - High probability of artificial adjustment or incomplete logging of LQA results

# The science of language quality

The background of the slide is a gradient of blue, transitioning from a lighter blue at the top to a darker blue at the bottom. Overlaid on this gradient are several semi-transparent, wavy blue bands that create a sense of depth and movement. In the lower right quadrant, there is a soft, circular glow that resembles a sun or moon, adding a subtle light source to the composition.

# The good and Evil of Subjectivity

- There is an infinite number of “perfect” translations
- Usable translation can be less than perfect
- Quality is intrinsically subjective = **The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.**
- **We MUST have LQA grading ruler**

# The Beast: Problems of Language Quality Metrics

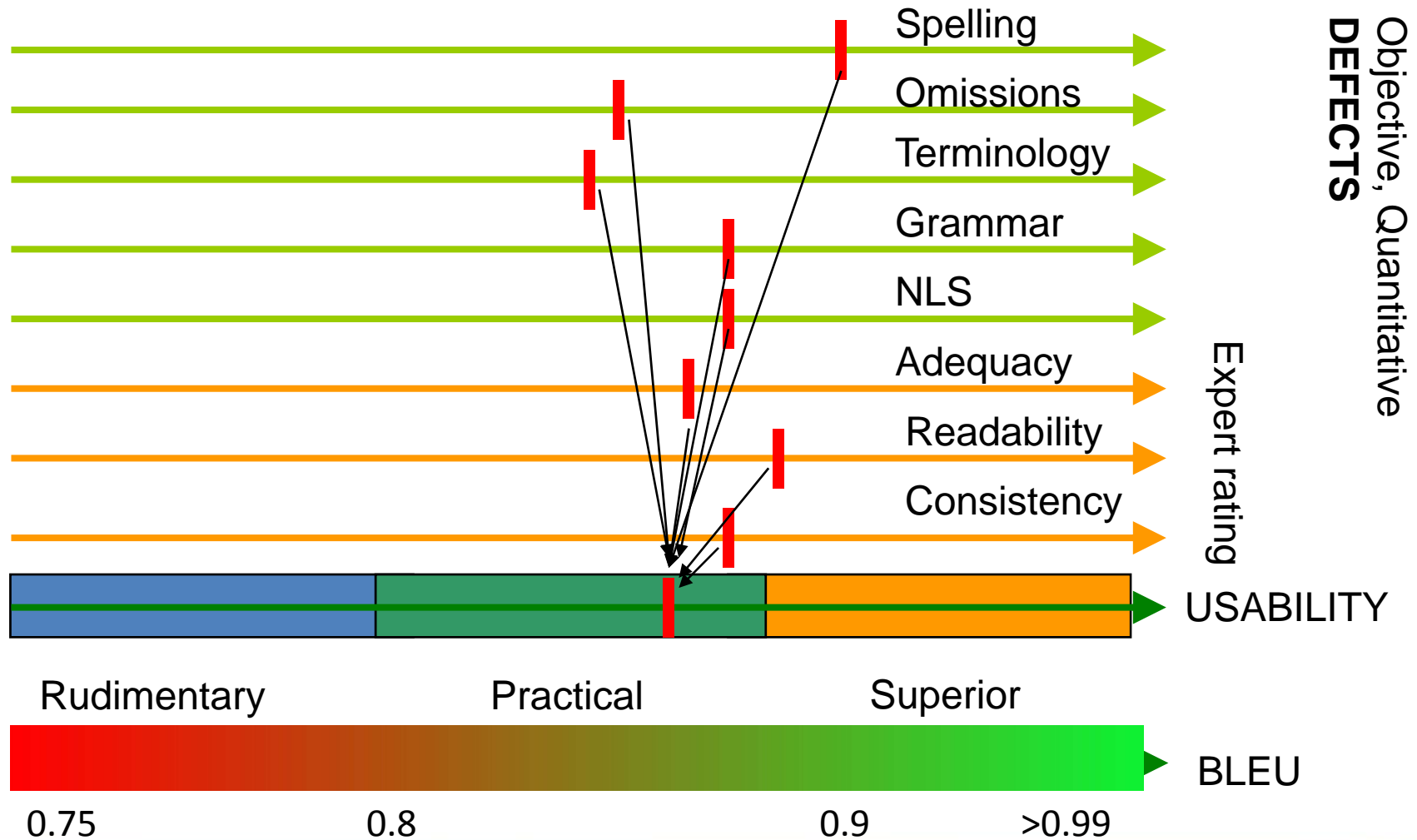
- Every company has its own LQA metrics
- Subjective metrics are essential, >80% of the weight
- BUT they make the grading system unstable!



## The solution is to ascend to a higher level of abstraction

- We **cannot** define single language quality standard of “perfect translation”
- We **can** define a methodology to define one language quality standard approach

# Quality = Compound, Perceptual Usability



# Quality Score = The Elements, The System

## Usability cut-off

Minimum, threshold levels are required for EVERY dimension.

### Objective Dimensions

5 Dimensions

- Country Standards
- Spelling
- Grammar
- Terminology
- Omissions

80% of the Final Score

### Subjective dimensions

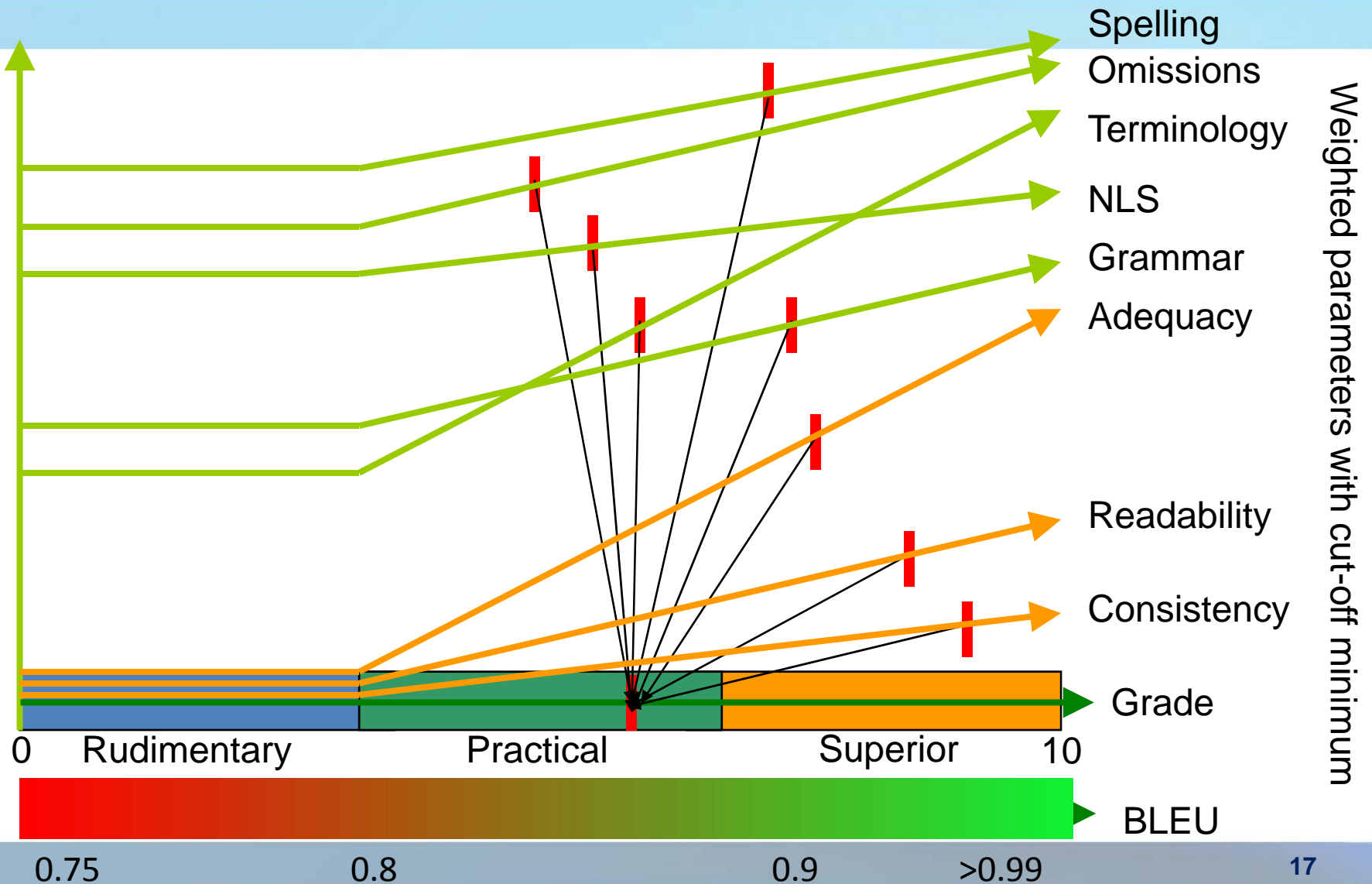
3 Dimensions

- Readability (2/3 of the weight)
- Adequacy (1/3 of the weight)
- Style (1/8 of the weight)

20% of the Final Score

Way to the compound grade.

# The Formula



# How much should be reviewed?

- Do we need to check everything?
- If a certain % is sufficient,
  - Is there a scientific approach to selecting the overall volume to be QA-d?
  - What is the “magic” sampling scope that would guarantee peace of mind?
- How can we produce reliable and representative QA results?

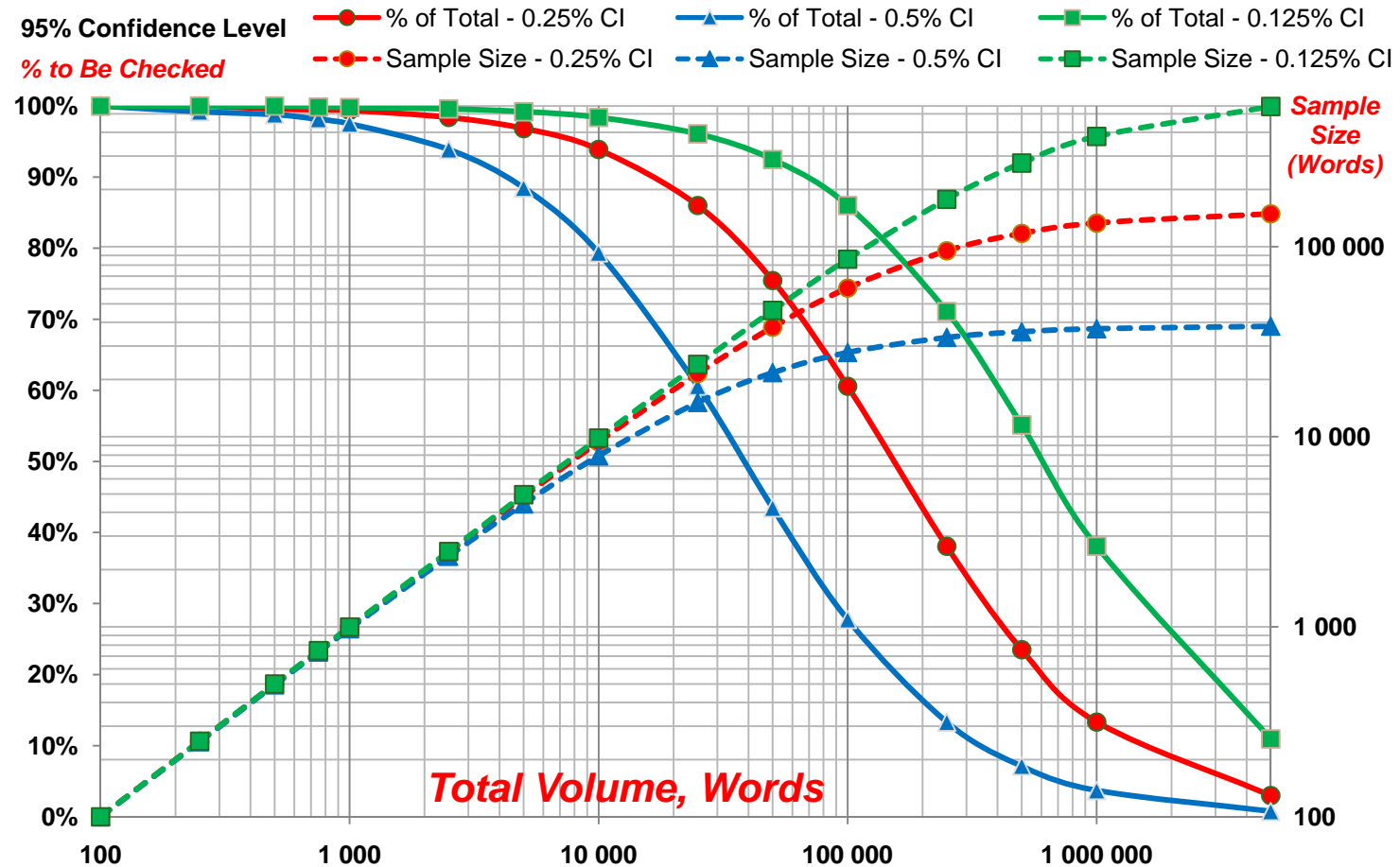
# LQA and opinion polls

- We can only poll a limited number of people  
OR Review a limited number of words
- After polling N people (58% said "YES")  
OR Reviewing N words ("PASS" for 85% of all segments) we need to assess the CREDIBILITY of the result  
*(Or find N that guarantees reasonable credibility)*
- We have to use the so-called Confidence Level (CL) & Confidence Interval (CI):  
"... We can assert with 95% confidence (Confidence Level) that 58% of the population will vote for X.  
The margin of error (Confidence Interval) is 5% for this survey..."

# LQA Specifics: Setting CL & CI

- LOW Error Levels expected  
(Typically less than 1 error is allowed per 100 words)
- HIGH Precision Required. Opinion Poll Analogy:
  - Will a marginal “United Incompetence Party” get parliament representation given the 1% Election Threshold?
- Margin of error (CI) must fall WELL BELOW the allowed/expected Translation Error Levels, i.e. below 1%
- Required Sample Size (QA-d Volume) depends on:
  - Overall Volume (Population)
  - Confidence Interval (Margin of Error):  $\ll 1\%$
  - Confidence Level (Reliability): Typically set at 90-95%

# How Fastidious Are You?



# LQA Sampling Summary

Volume	Sample Size / Check
< 10 K words	100%
20 -> 200 K words	85% -> 45% (+/- 25%)
> 300 K words	100-150 K words (UP TO 3 TIMES More/Less)

- Not applicable to crowdsourcing-type projects
- Optimal Sampling: Random Selection, No Exclusions!  
Recommended: One-page (250 words) pieces
  - Size convenient for reviewers
  - Big enough to make conclusions about adequacy, fluency, etc.
  - Small enough to provide representative stats (10-30 pages/person)
- ALWAYS Check ALL Priority/Exposed Pieces in Full
- MUCH LESS effort required to check for a LEMON:  
CI = 1%, Sample Size = 10 K words

# Manual implementation



# Metrics is implemented on Excel spreadsheet

Format Painter						
Clipboard		Font	Alignment	Number	Styles	
A10      fx      Once you're finished, simply flick to post them online to share with family and friends.						
	A	B	C	D	E	F
2	Date:		Accuracy	0	0	1
3	Language:	German	Terminology	0	0	0
4	Project name:		Linguistic	0	0	2
5	Wordcount:	883	TOTAL	0	0	3
6	Overall Score:	91				
7	Reviewer's general comment: Few linguistic issues require correction. Translation sounds fluent and is suitable overall.					
8						
9	Source text	Target text (original translation)	Target text (reviewer's suggestion)	Description	Error classification	Error severity
10	Once you're finished, simply flick to post them online to share with family and friends.	Sobald Sie fertig sind, stellen Sie die Fotos durch ein Schnippen online.	Sobald Sie fertig sind, stellen Sie die Fotos durch ein Schnippen online <b>und geben Sie diese für Familie und Freunde frei.</b>	The part "to share with family and friends" not localized.	Accuracy	Low
11	Increase your system's performance and response time with up to 8GB DDR3 1333MHz dual-channel memory.	Verbessern Sie mit bis zu 8 GB DDR3-Dual-Channel-Speicher bei 1333 MHz die Systemleistung und Reaktionszeit. <b>Dank der Solid-State-Festplatte (SSD) werden System und Anwendungen deutlich schneller gestartet.</b>	Verbessern Sie mit bis zu 8 GB DDR3-Dual-Channel-Speicher bei 1333 MHz die Systemleistung und Reaktionszeit.	The following phrase not found in source: "Dank der Solid-State-Festplatte (SSD) werden System und Anwendungen deutlich schneller gestartet."	N/A	
12	Performance you need. When you need it.	Starke Leistung <b>Und</b> genau zum richtigen Zeitpunkt.	Starke Leistung und genau zum richtigen Zeitpunkt	The term "und" requires lower case; and no ending punctuation is used in headings (country standards). Check the following headings as well.	Linguistic	Low
13	After setup, it can automatically back up data and help protect against software, hardware and catastrophic failure.	Nach der Einrichtung werden Ihre Daten automatisch gesichert, sodass <b>Sie</b> beim Ausfall von Software und Hardware oder in Notfällen geschützt sind.	Nach der Einrichtung werden Ihre Daten automatisch gesichert, sodass sie beim Ausfall von Software und Hardware oder in Notfällen geschützt sind.	Typo; "sie" requires lower case because it refers to data and not the reader.	Linguistic	Low

# LQA: Major Challenges (I)

- **Productivity expectations and “The Big Disappointment”**
  - Average productivities based on GOOD translation quality
  - In the case of poor quality it drops, and more time is needed
  - What’s to be done if allocated time has been spent
    - Stoppage flags in case of poor quality
    - Stopping QA when the agreed hourly limit is reached
  
- **Potential conflicts and never-ending disputes between parties**
  - Vendors tend to dispute EVERYTHING, even if there’s no chance to change final QA results
    - Lengthy, time-consuming discussions without any results
    - Huge and costly increase in PM time/overhead
  - Eliminating inconsistencies in file versions, reference materials and guidelines
  - Limiting the number of LQA dispute iterations is a must
    - There should be a formal way to break the vicious circle
  - Vendors should not dispute results unless
    - LQA feedback contains serious mistakes
    - Ratings might be seriously changed as a result

# LQA: Major Challenges: (II)

- Potential conflicts and never-ending disputes between parties
  - Vendors tend to dispute EVERYTHING, even if there's no chance to change final QA results
    - Lengthy, time-consuming discussions without any results
    - Huge and costly increase in PM time/overhead
  - Eliminating inconsistencies in file versions, reference materials and guidelines
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# LQA: Major Challenges: (III)

- **Objectivity and adequacy of reviews**
  - Reviewers need to undergo general LQA training & custom training for each client
  - LQA review quality itself has to be checked on a regular basis
- **Choice of balanced evaluation criteria**
  - Avoiding sharp dependencies on any particular factors
  - Limiting subjectivity: PASS/FAIL approach to Expert Opinions
- **Mismatching expectations of parties involved**
- **Scheduling & timing problems**
  - LQA follows translation, almost always on a critical path

# Who are The Linguists?

- Translation Experience = 3+ years
- Technical Knowledge
- Special training:
  - General principles for QA & Terminology work
  - Client-specific requirements & guidelines
  - QA forms & processes



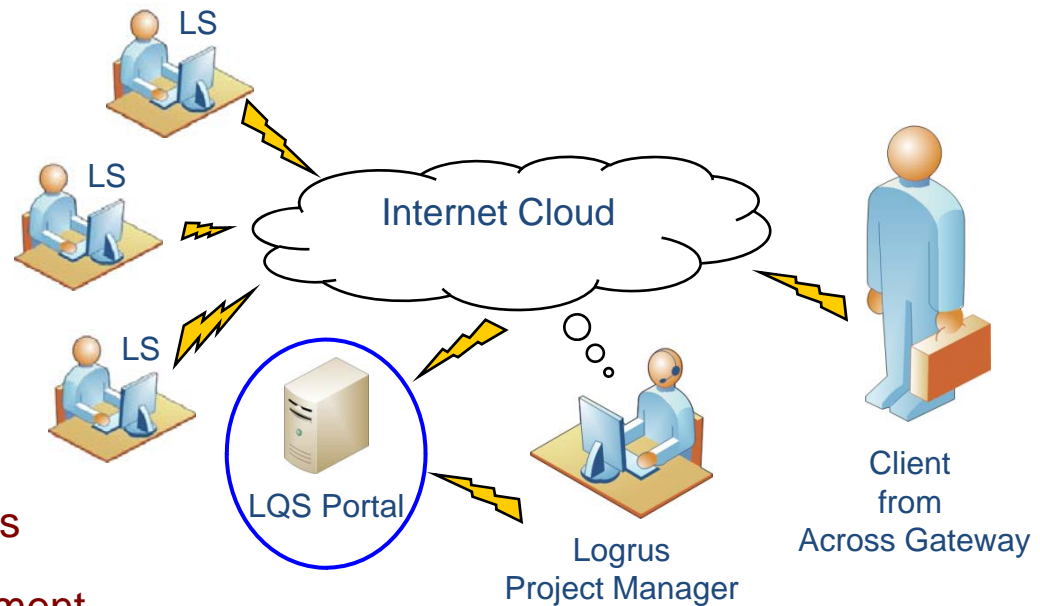
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# LQA OnDemand: Practical implementation

# Semi-Automated Human Assisted Service

Logrus LQA Service is:

- Methodology
- Technology
- Organization
- Network of LQA linguists
- Skilled Project Management



# Only five IE screens to place QA job and get results

The screenshot displays a web application interface for project management and QA tracking, accessed via Microsoft Internet Explorer. The main window shows a list of projects with columns for Project Name, Completed, and Actions. A detailed view of a project (060002 Exchange Server 12) is shown, including a table of QA results for various languages and a project details form.

Project Name	Completed	Actions
060001 Windows Workflow Foundation EDB QA	100%	?
060002 Exchange Server 12	100%	?
060003 MS Learning Workshop 2546A	100%	?
060004 Advanced Windows Forms Technologies with Microsoft® Visual Studio® 2005	100%	?
060005 MSN Hotmail (part 1)	100%	?
060006 LCS (part 1)	100%	?
060007 Windows Live Safety Center	100%	?
060008 Exchange Server - Russian	100%	?
060009 Language Quality Standards Pilot - Premium	100%	?
060010 Language Quality Standards Pilot - Value	100%	?
060011 Language Quality Standards Pilot - Basic	100%	?
060012 Systems Management Server 2003 SP2 (CHS)	100%	?
060013 Office 12 - PKG review	100%	?
060014 Microsoft Connect v2.0	100%	?
060015 Office Communicator 25	100%	?
060016 Windows Vista	100%	?
060017 Loc vendor tests	100%	?
060018 MS Learning ILT 2787 French Language QA	100%	?
060019 Real-Time Communications Server (UA)	100%	?
060021 2779A: Implementing a Microsoft SQL Server	100%	?
060023 2780A: Maintaining a Microsoft SQL Server	100%	?
060022 MSN Hotmail (part 2)	100%	?
060024 MS Learning ILT - Instructor Led Training C	100%	?
060026 Microsoft Update for Vista	100%	?
060020 Office 12 Retail - PKG review	100%	?

Language	Hand-Off Sent QA	Hand-Off Checked QA	QA Results Received QA	Hand-Back Checked&Fixed QA	Results Sent To Client QA	Notification Sent QA	Vendor QA	Product QA	Completed	Actions
Save All Changes	Mark all	Mark all	Mark all	Mark all	Mark all	Mark all				
Brazilian Portuguese	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		NO PASS	100%	?
Chinese (Simplified)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
Chinese (Traditional)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
French	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		NO PASS	100%	?
German	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
Italian	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
Japanese	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
Korean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		PASS	100%	?
Spanish	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		NO PASS	100%	?

**Project Details - Microsoft Internet Explorer**

Product Name: .Net Frameworks  
Project Name: .Net Frameworks (part 1)

Created Date: 11/12/20  
Last Modify Date: 11/12/20  
Logrus PM: Aleksand

Status: % Completed, Completed, Ale

# LQA Service Portal Technology

- .NET Web Portal with automated workflow features
- SQL Server for rates, contacts, project data
- Middleware LQS subject matter area formulas and calculations
- LQA Methodology is the KEY
- PM service solution is the vehicle

# Service features

- Automated user registration
- Automated project costing
- Automated service time prediction
- Automated service step notifications
- Automated progress and result screen
- Human-assisted communication, setup and project management
- Human linguistic QA service and usability evaluation

# Limited customization is required

- QA defect metrics
- Rates
- Productivity expectations

# No Corpus Requirements

- QA Portal Service can QA anything, from human to MT output, with no usability limits: clients are NOT interested what is specific vendor technology in producing usable translation.

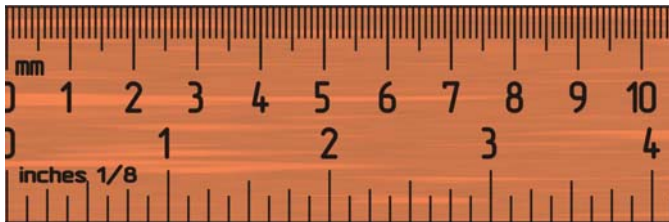
# Pre-conditions for technology implementation

- One and only precondition is to have uniform LQS requirements across organization

# What is LQA Service On Demand?

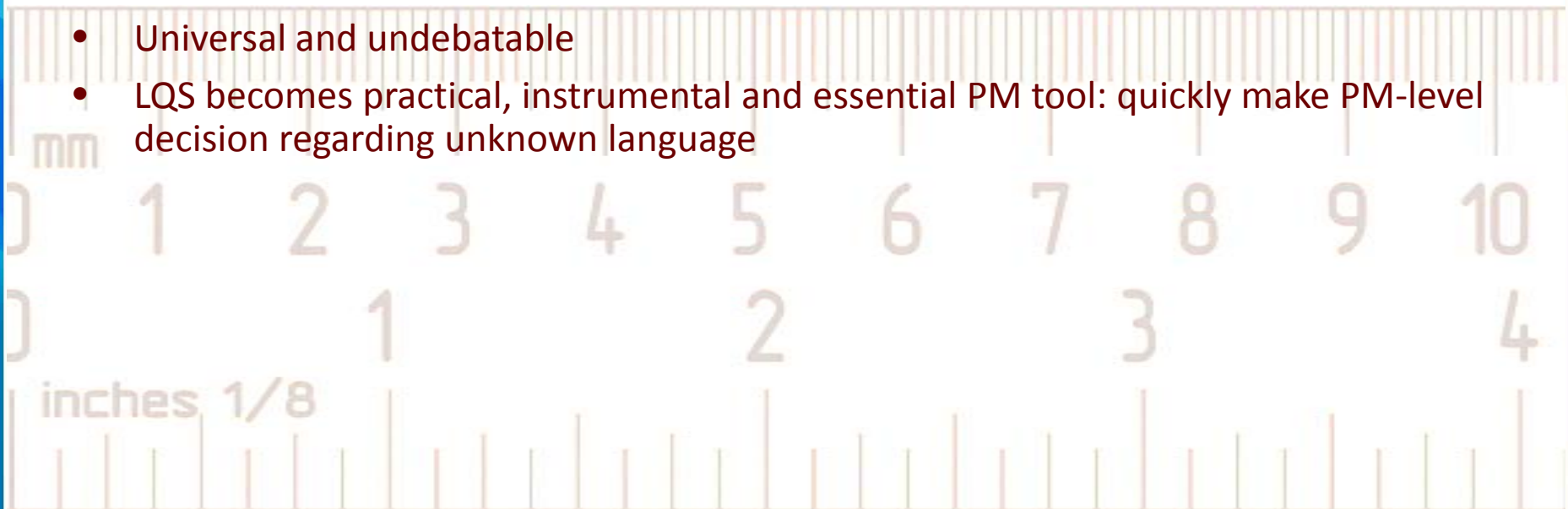
- Standardized LQA Methodology supported by subject matter area formulas and calculations.
- QA requirements may be customized for different clients.
- QA Model & Defect Metrics: what's to be measured/evaluated; what are tolerance levels; Style Guides/Guidelines, glossaries, etc.
- Service can QA anything from human translation to MT output; no dependence on tools or technology used; it makes it possible to COMPARE how each language is doing relative to the others.

- Results and advantages

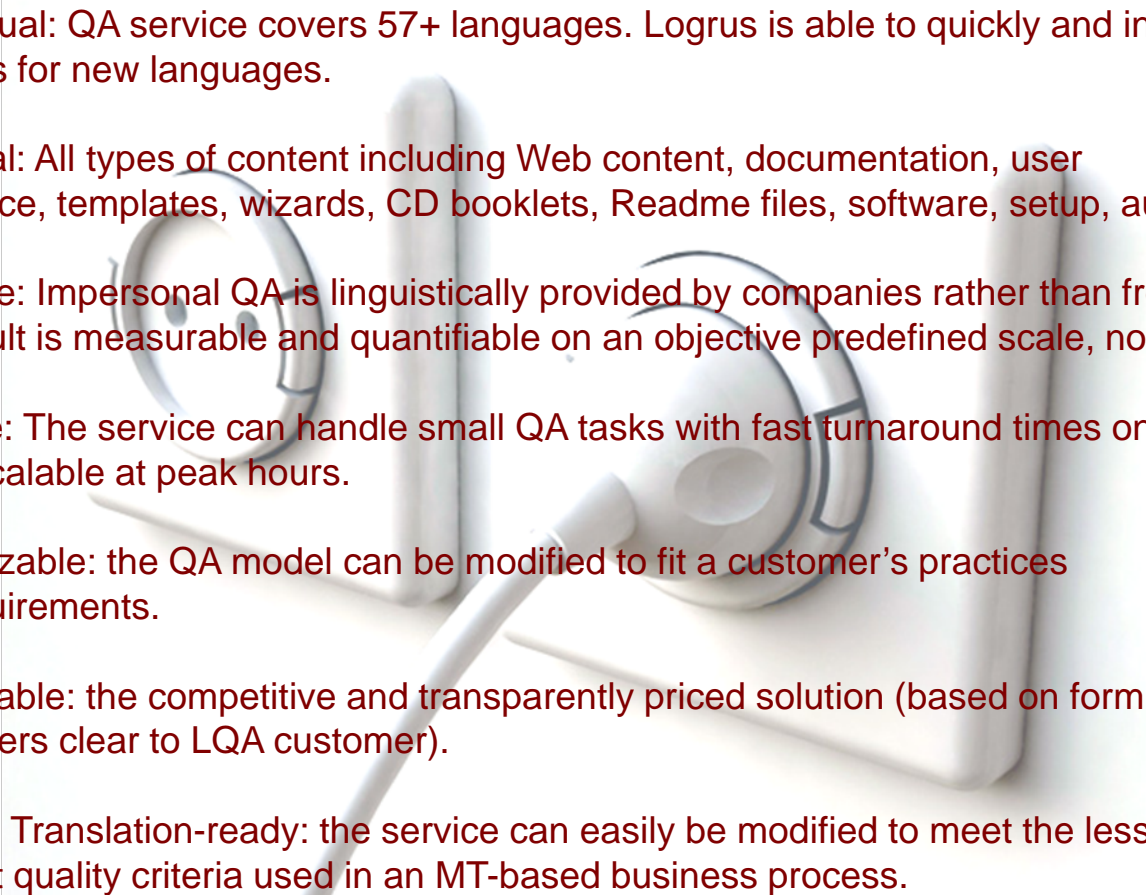


# Major Quality Improvement: We CAN measure product quality now

- Easy and simple
- Immediate costing of small pieces within responsibility of any PM: no budgetary approvals required
- Quick
- Universal and undebatable
- LQS becomes practical, instrumental and essential PM tool: quickly make PM-level decision regarding unknown language



# LQA OnDemand: Advantages

- 
- Multilingual: QA service covers 57+ languages. Logrus is able to quickly and independently develop solutions for new languages.
  - Universal: All types of content including Web content, documentation, user assistance, templates, wizards, CD booklets, Readme files, software, setup, audio files, scripts, etc.
  - Objective: Impersonal QA is linguistically provided by companies rather than freelance reviewers. The result is measurable and quantifiable on an objective predefined scale, not personal opinion.
  - Scalable: The service can handle small QA tasks with fast turnaround times on short notice and is highly scalable at peak hours.
  - Customizable: the QA model can be modified to fit a customer's practices and requirements.
  - Accountable: the competitive and transparently priced solution (based on formula with transparent parameters clear to LQA customer).
  - Machine Translation-ready: the service can easily be modified to meet the less stringent quality criteria used in an MT-based business process.

# Measuring Productivity Increases And Economic Benefits

- **Granular PM time saving** on the client side is immediate productivity increase and benefit. It takes about 120 hours to set up manual LQA process from scratch, 80 hours to carry out manually average QA project and process and interpret results, not to mention process friction and disconnect.
- **Project optimization savings** for the entire project flow in terms of time, number of activities, etc., can be a huge saving.
- It is economical and practical to centralize LQA and **remove redundant and inconsistent LQA effort**.
- As outsourced, standardized LQA service develops, they will become **more economical than in-house LQA services** (it already is - centralized outsourced LQA project placement only takes 4 hours to read portal instructions and place LQA job online).

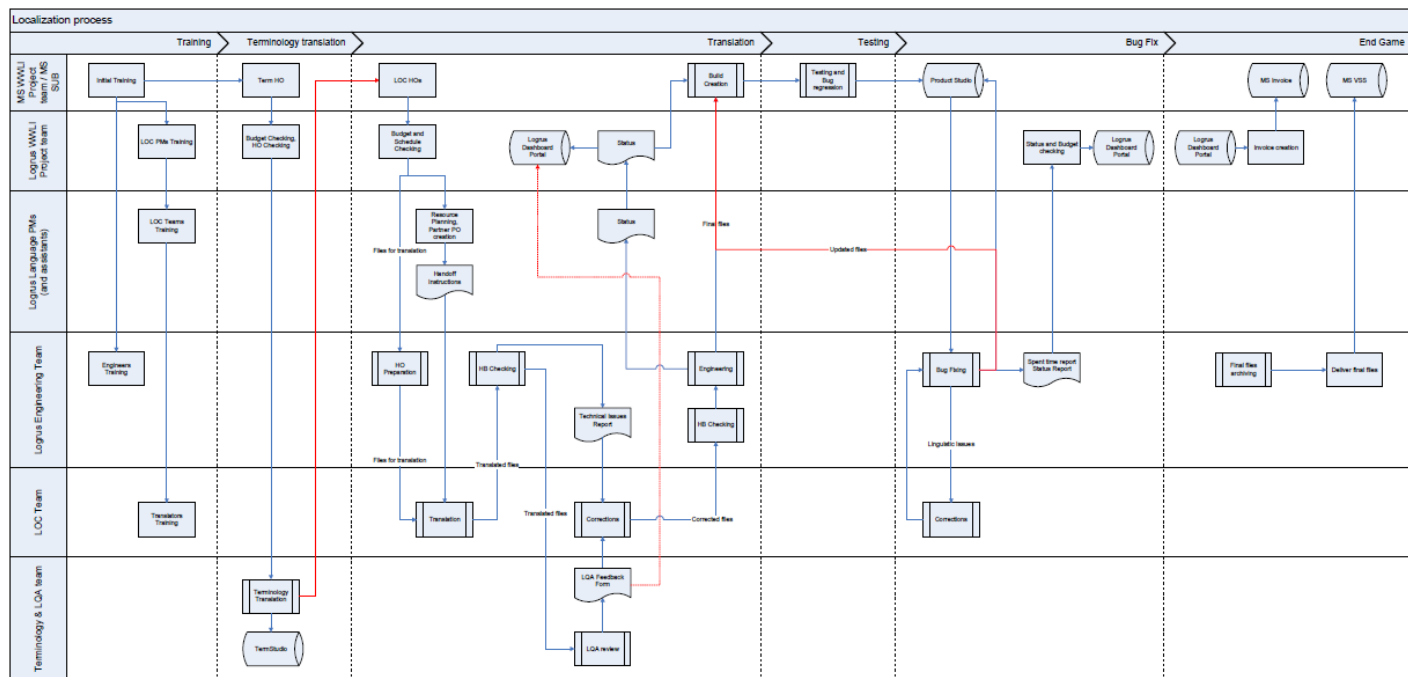


# Business process reengineering tool

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# Integration into the process

- LQS is a separate, granulated language service suitable to be built into any part of language process
- In several workflow scenarios



# Business reasons to implement LQA step in your translation process

Linguistic Quality Assurance is not “just” a quality assurance tool.

It is a powerful business tool used by our clients to implement the following initiatives:

- ❑ PRODUCT QUALITY CONTROL
- ❑ VENDOR EVALUATION:
- ❑ COST REDUCTION MECHANISM:

# Production Quality Control

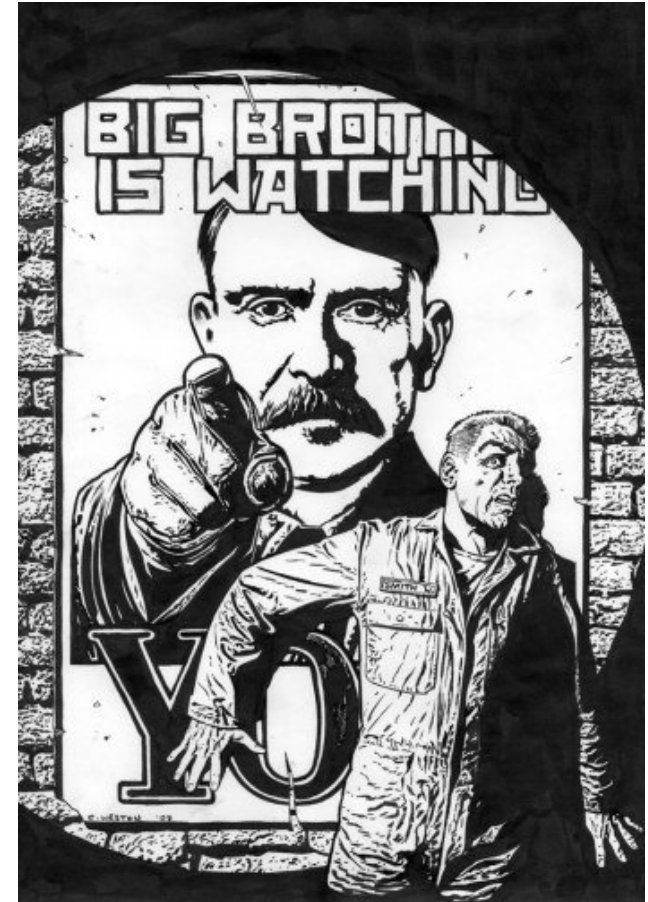
- ❑ Past performance of translation vendor is not a guarantee of future results.
- ❑ No certification can guarantee the quality of every deliverable.
- ❑ Build ready quality control into your translation processes (on qualified, proven and ready to be rendered SERVICE ON DEMAND).
- ❑ Vendor ratings can be assessed, collected and analyzed based on constant spot-check product quality control.
- ❑ How Much Should be checked on conveyor belt?

Volume	Sample Size / Check
< 10 K words	100%
20 -> 200 K words	85% -> 45% (+/- 25%)
> 300 K words	100-150 K words (UP TO 3 TIMES More/Less)



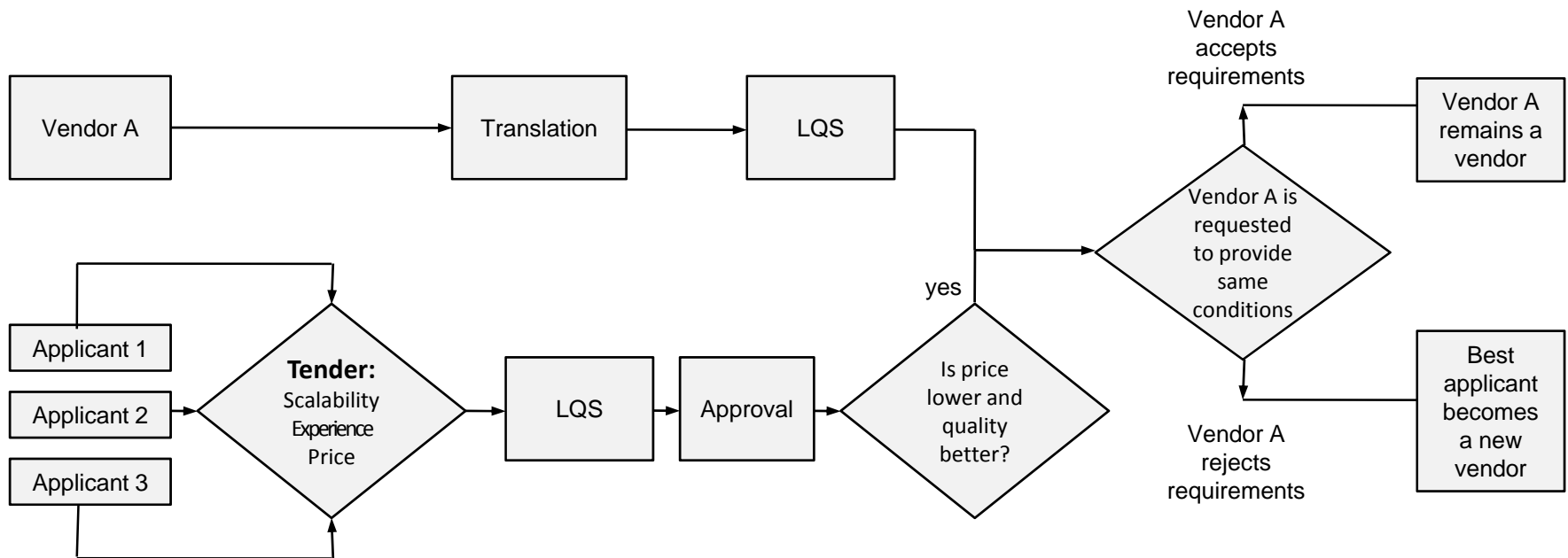
# Vendor Performance Evaluation

- ❑ Spot-check quality of your vendors without costly internal efforts;
- ❑ Historical data is a basis for vendor Performance Evaluation Score (e.g. if vendor receives a FAIL, his score is decreased weighted to the total volume he has translated since the most recent FAIL).



# Cost reduction mechanism

- ❑ Clients use our LQS service to seek vendors with the same quality and service level, but lower price.



# Why outsource QA service?

## Why do clients need dedicated QA vendor?

- LQA is usually performed on randomly selected, statistically representative samples that consists of 5-8% of the total volume of materials with short turnaround time and long gaps between QA jobs.
- Each LQA expert must have a best knowledge of all relevant instructions, glossaries, supporting information and other reference materials pertaining to given subject matter and customer-defined variations from standard rules and terminology.
- All in-country reviewers must be preselected, trained (including proprietary tools and TMs), available on a moment's notice, manage during LQA, and provided with all necessary materials.
- You need significant LQA volumes to load your own LQA linguistic staff, not to mention development of specialized tools and project management on your side.

All of the above makes it quite costly to organize and maintain an in-house QA service.

Fortunately, there is a professional ON DEMAND LQA service out there for you.



**Thank you!**

Questions?