## CAPITA Translation and interpreting

Simplifying complex global communications

## "Making the business case for adopting MT"

14th biennial conference of the AMTA



Rodrigo Cristina October 2020

https://capitatranslationinterpreting.com

## Delivering value. Understanding ROI.

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We understand

The complexity of your organisation

The challenges to mitigate risk and avoid liability The impact our work has on brand and reputation

W that

We drive cost efficiencies in everything that we do to make sure that you always achieve the expected return on your investment.



## MT @ Capita TI - SmartMATE

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#### **Traditional Language Service Providers**

Low development capabilities
Immature post editing language resources
Low security

MT

#### Traditional MT Technology Providers

Little or no language capabilitiesLow capitalisation - financially weak

• Little integration with translation workflows

## SmartMATE

Translation technology suite



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# The omnipresent problem

Localization ROI is traditionally complex to measure, many times subjective

The budget holder and the localization manager don't always speak the same language



Tough and frustrating conversations to secure the budget Localization is all about building bridges between people that speak different languages

## Why not apply the same principle?

# The NPV (Net Present Value) approach

- Investment analysis framework used since the 1950's
- The NPV is one of the most widely used tools in investment analysis.
- Quantifiable => better quality localization business cases
- Easier conversations and less frustration
- Potentially higher success rate
- Not the "silver bullet" but a clearer framework to discuss ROI for MT programs





Net present value (NPV) is an investment analysis methodology that measures the difference between the initial project investment and the net present value of cash flows generated by that investment over a period of **time**, using the **DCF (Discounted Cash Flow)** methodology.

The following formula is used to calculate the NPV: 
$$NPV = \sum_{t=1}^{n} \frac{CF_t}{(1+rr)^n} - I_0$$

Decision criteria: If NPV > 0 then invest If NPV < 0 then do not invest

## Time and DCF in the NPV model

- Time and DCF (Discounted Cash Flow) are key concepts in understanding the model's dynamic
- 1\$ today is different from 1\$ tomorrow (inflation, interest rate)



## NPV model applied to MT – how does it work?

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## lo deployment investment for MT program

- Annual license for year 1
- Hosting costs year 1
- Software deployment costs
- Includes data cleansing and language asset optimisation (TMs, glossaries and monolingual content) and make them available for engine creation
- Includes building and setting up the engines for production and gisting purposes
- Includes testing and evaluating the best engine options (on real projects)
- Includes fine tuning the chosen engine before the "go live" stage
- Includes any integration required

CF

### annual net cashflow (return and savings – running costs)

#### **Return and savings:**

- Includes the PEMT savings effect on current translation rates
- Includes the effect of faster time to market for your products that will generate more sales
- Includes savings based on an Enterprise MT service managed solution

#### Annual costs:

- Includes building new engines for new languages
- Includes retraining of the existing ones
- Add specific features (for example a specific glossary for a specific product line)
- Annual licenses for years 2 and 3
- Engine hosting for subsequent years

## (1+RR) return rate of best available option

What would you alternatively do with the funds available to optimise your localisation output and what return rate you would expect from it.

- For example, the cost of an authoring tool to improve TM matching that would save you 10%
- The estimated return of another (best) available MT option
- The estimated return of training the technical writing team to improve source content
- Return of cleaning and optimising the language assets (TMs, glossaries)
- Return of hiring additional internal translators

NPV = 
$$\frac{CF_1}{(1+rr)} + \frac{CF_2}{(1+rr)^2} + \frac{CF_3}{(1+rr)^3} - I_0$$

Like in any investment project, there are a number of assumptions we have to make, namely that the MT program will reach its maturity in 3 years. This is debatable but our data gives us some hints in that direction.

> Decision criteria: If NPV > 0 then invest on MT If NPV < 0 then do not invest in MT

## MT ROI measurement model – client case

Context:

- Large European Manufacturer with global footprint
- Mature and centralised localisation model
- Localising tech pubs content into 20+ languages
- Increasing volumes in top 10 languages
- Long-time user of a translation management system
- Mature terminology management (high quality glossaries)
- Large amount of content stored in translation memories
- TEP applied to technical content
- Average volume per language 800000 words
- TM leverage 68%
- New words: 32% of total
- Average NW rate 0.145\$ + 5% PM fee (top 10 languages)
- Evaluating deploying a global MT program across 10 of the 20 languages
- Evaluating other mutually exclusive investments (authoring tool and TM clean-up)
- Client wants to know the MT program's expected ROI => sell internally

## MT ROI measurement model – client case

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## $I_0$ – Initial investment

- Year 1 software license
- Client's language assets preparation, cleansing and optimisation
- Building several customised candidate engines
- Testing and evaluating engine performance Automatic and Human evaluation (DQF)
- Detailed findings report
- Pre deployment systems configuration
- Engine deployment costs
- Total initial investment 93000\$ (all languages)

MT program Annual benefits and costs (Annual Net Cash Flow \$)

### **Benefits (Cash inflow)**

- Expected annual savings in NW rates through PEMT is 25% (92800\$ across all 10 languages)
- LSP PM fee decrease from 5% to 3% (9540\$ savings across all 10 languages)
- Annual MT running benefits 102340\$

## Costs (Cash outflow)

- MT license annual cost (unlimited use)
- Engine retraining (all 10 languages, once a year)
- Annual Hosting cost (10 engines)
- Annual MT running costs 44000\$

### Benefits of the alternative investment to MT program (discount factor rr in %)

- New authoring tool, will increase TM matching/leverage in 9%
- Major review/cleaning TMs and glossaries, estimated 13% more leverage from TMs
- 22% better matching is estimated to produce **8% of budget savings per language**

$$NPV = \frac{CF_1}{(1+rr)} + \frac{CF_2}{(1+rr)^2} + \frac{CF_3}{(1+rr)^3} - I_0$$

 $\mathsf{NPV} = \frac{(102340\$-44000\$)}{(1+8\%)} + \frac{(102340\$-44000\$))}{(1+8\%)^2} + \frac{(102340\$-44000\$))}{(1+8\%)^3} - 93000\$$ 

NPV = 57347.84\$ (ROI for Global MT Program) NPV > 0 the decision is to move ahead with the MT program

#### Notes:

rr is 8% and represents the expected return of the alternative investment

### $\mathbf{I}_{0}$ - All initial costs of the MT program

 $CF_1$  (Savings – yearly costs) will be (102340\$-44000\$ = 58340\$)

 $CF_2$  (Savings – yearly costs) will be (102340\$-44000\$ = 58340\$)

 $CF_3$  (Savings – yearly costs) will be (102340\$-44000\$ = 58340\$)

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## **THANK YOU!**



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