internationalization at CA technologies

Date May 26, 2011
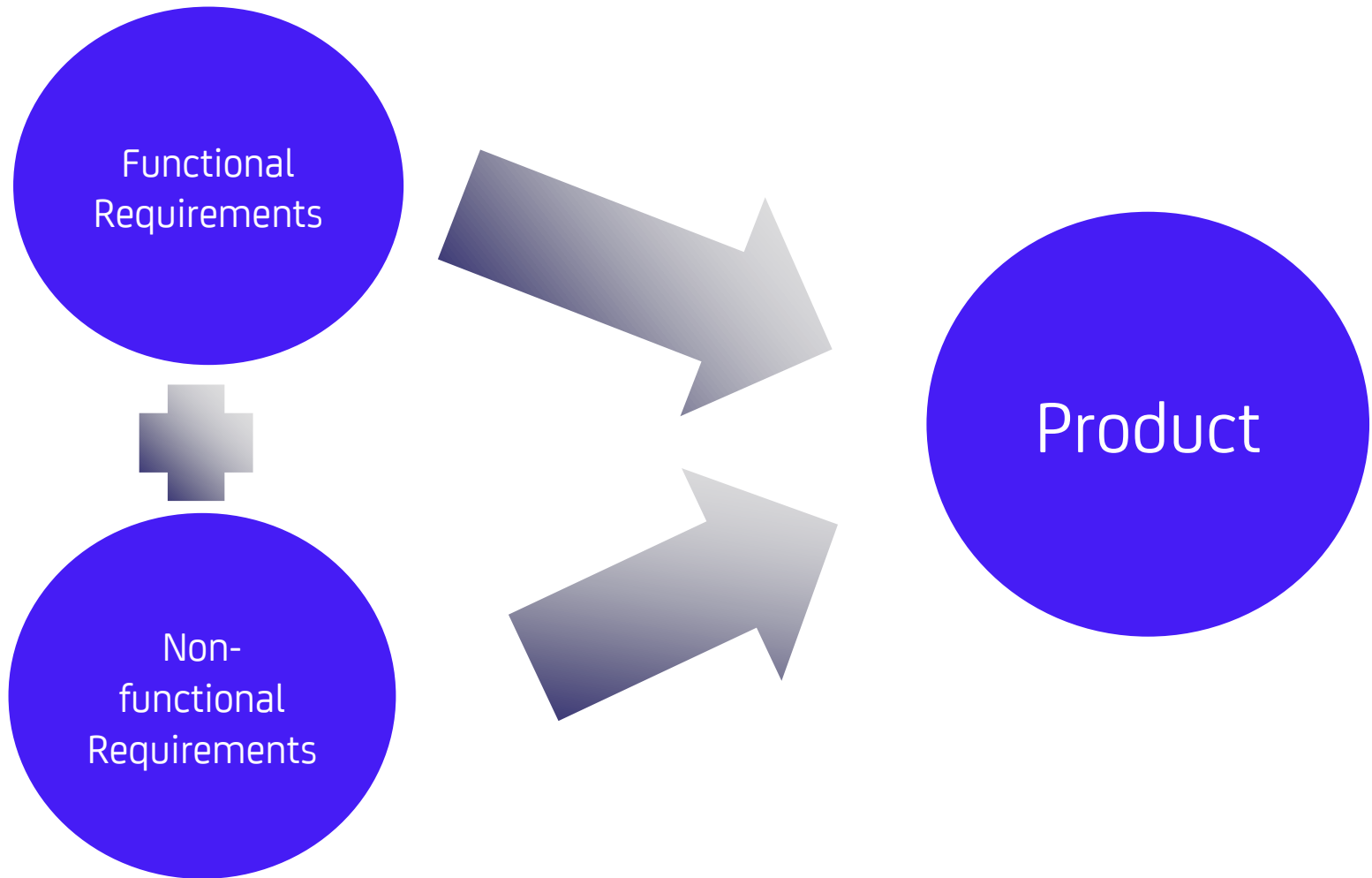
Who am I?

— Alfons Neumann

— Sr. Director in the CoE internationalization

— Since 12 years with CA

— About 28 years IT experience

Internationalization

Functional vs. Non/functional requirements

Functional Requirements

+

Non-functional Requirements

Product

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Non functional requirements

— Common basic features to make a product

  – Usable

  – Maintainable

— They make the difference!

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Non functional requirements (selection)

Installability

Upgradability

Accessibility

Internationalization

Localizability

Securability

Supportability

Some Definitions

What are we talking about?

— **internationalization** = **i18n**

— **Localization** = **L10n**

— **Globalization** = **G11n**

l10n vs i18n vs g11n: What's the difference?

Internationalization (i18n)

Internationalization is the process of designing a software application so that it can be adapted to **various languages** and regions without engineering changes.

Localization   (L10n)

Localization is the process of adapting internationalized software for a **specific region** or language by adding locale-specific components and translating text.

Globalization (G11n)

Globalization is used as the **combination** of Internationalization and Localization.

Source: wikipedia.org

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Our answer:
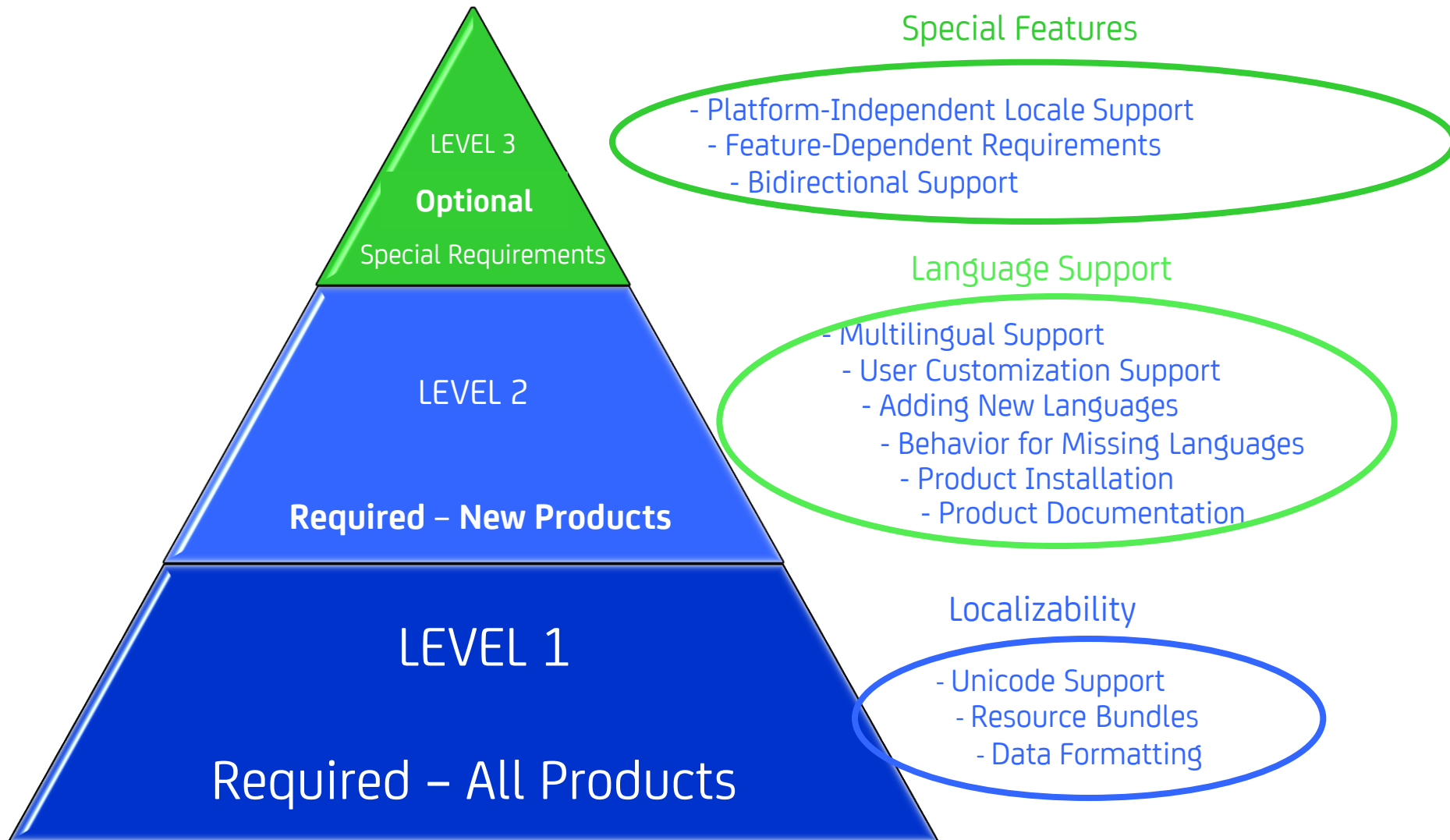# Center of Excellence for Internationalization

— One team of specialists

- Architects

- Software engineers

- QA engineers

— Focused on **one** topic: internationalization

— Bundle the knowledge and experience

- Allows high quality and effience

— Provide and maintain the i18n guidelines and policies within CA

— Provide tools to further automate the work

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I18n:

The Scope

Center of Excellence for Abilities
i18n policy - overview

Special Features
- Platform-Independent Locale Support
- Feature-Dependent Requirements
- Bidirectional Support

Language Support
- Multilingual Support
- User Customization Support
- Adding New Languages
- Behavior for Missing Languages
- Product Installation
- Product Documentation

Localizability
- Unicode Support
- Resource Bundles
- Data Formatting

LEVEL 3
Optional
Special Requirements

LEVEL 2
Required – New Products

LEVEL 1
Required – All Products

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Internationalization:
Scope (selected)

- Externalize hard-coded strings

- Eliminate concatenation of strings

- GUI design to fit different languages

- ! Strings exceed during translation

- Date and time fitting different locales

- First working day of the week

- Number presentation

    - 8.000,00 € is not 8,000.00 €

- Full Unicode support

- 3rd party tools

- Installation

- User specific culture

- OS/browser specific culture setting

- DB support for Unicode

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I18n under the hut

Different Language Environments

Testing on 1 Asian and 1 Western language environment

Asian
Japanese
S-Chinese
Korean
T-Chinese

Western
French
German
Spanish
Italian
Brazilian Portuguese

Note: Full tests in all supported languages are performed after the translation

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Testing with pseudo localized resources

I18n under the hut: Testing with pseudo localized files Screen without pseudo localized resources

I18n under the hut:
Testing with pseudo localized files

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I18n under the hut:
Testing with pseudo localized files

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Date / time presentation

I18n under the hut:
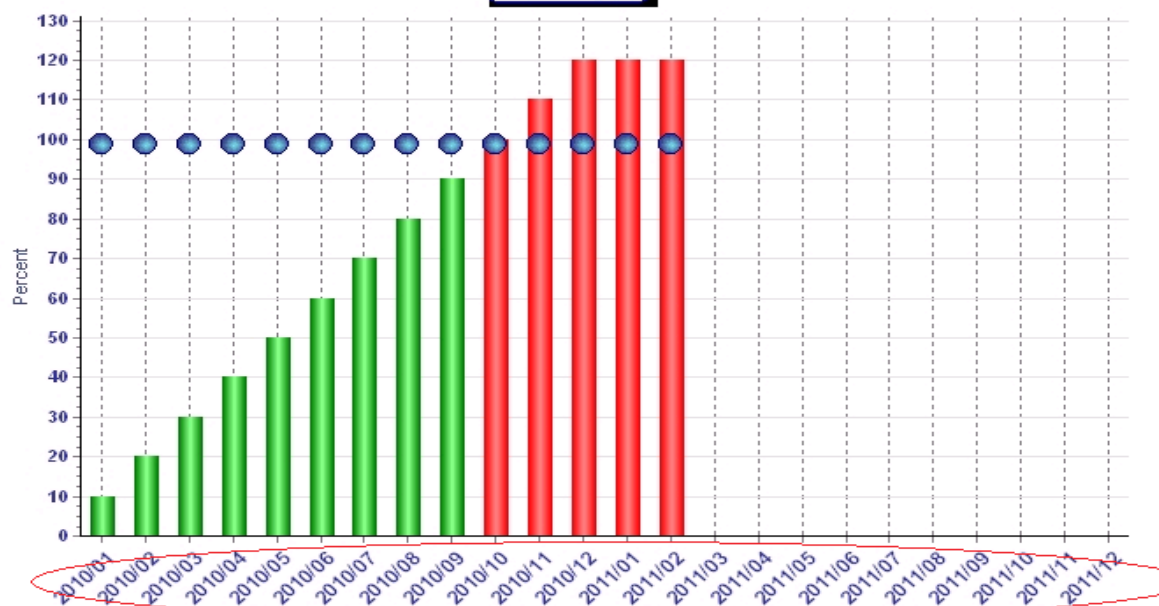
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をッ2kGthank you~è

Danke!

Q&A