: What is localization of decision support and analytics?

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As companies expand into the global marketplace decision support and analytics must often be localized to support communities of users from different nations. Localization is more than translating text on a web page into various languages. Localization should consider currency issues, cultural differences that impact the interpretation of data displays and text comment, and differing regulations and standards. There are many issues and obstacles that need to be evaluated in considering such projects.

Some of the obstacles to using technology to support decision-making in global corporations include: accounting and currency issues, different regulations and import/export restrictions, cultural differences including languages and different work-hours, and different interpretations of screen displays. Localization of decision support involves resolving these issues to insure users understand the system and results.

Accounting and other business practices differ from country to country. This makes getting accurate financial reports difficult. Also, currency conversion and fluctuations are another source of challenge in designing some DSS. The purpose of a decision support dystem is to inform decision-makers, and ignoring cultural issues may create mis-information or mis-interpretation. For example, not all cultures have the same assumptions about group decision-making and hence the use of a Group DSS. In some cultures, the norm is that all should have an equal voice in decision-making. Some cultures encourage an open and collaborative problem-solving atmosphere. Some cultural norms support detailed meeting notes and a very structured decision-making process. We need to ask if the project team has considered cultural issues.

English is the unofficial language of business and technology. The problem with accepting this conclusion about language usage when constructing DSS is that it may create a communication barrier between managers. Some countries, such as China, require that a certain percent of business documents be written in the native language. France requires that all public documents in France be written in French. Should a Decision Support System be available in multiple languages? If so, what is the cost?

Some laws and regulations insist that a certain percentage of data collected in a country must be processed there. Also, some countries have data import/export restrictions. This makes it harder to aggregate all data assembled throughout the world. These restrictions can have a major impact on the design of Data-Driven DSS.

Culture impacts evaluations of decision support screen displays including layout and design. Language can cause confusion in screen displays. Also, colors and icons may have different emotional and political meanings in different countries.

Tips and best practices for localization depend on the software application, but the following are general tips (cf., Coombs and Videki, 2013): 1) Plan Ahead, 2) Test your Software, 3) Avoid Hard Coding of Text, 4) Enable dates, numbers, and other region-specific data such as currency to show up in a familiar and comfortable way to all users, 5) Perform localization of Help.

One possible solution to many of these problems is what has been called IS/IT internationalization or localization. Internationalization is the process of planning and implementing IS/IT products and services so that they can easily be adapted to specific **local** languages and cultures. The internationalization process is sometimes called localization enablement. Localizing a decision support capability can include: 1) allowing space in user interfaces for translation of text into languages that require more characters; 2) developing software with authoring tools that support international character sets (Unicode); 3) creating or adopting graphic images for text labels; and 4) using examples in help systems and software documentation that have a broad, global meaning.

BusinessDictionary.com defines localization as the "practice of adjusting a product's functional properties and characteristics to accommodate the language, cultural, political and legal differences of a foreign market or country". Decision support and analytic systems are products that should be localized. At a minimum localization issues must be addressed in the evaluation of a proposed system that will have a global reach.

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