



Carnegie Mellon University

Buy / Build

Fully implementing a solution

- What are the major steps to fully implementing a custom-built solution?

Fully implementing a solution

Task	Buy	Build
Define requirements	√	√
Design		√
Develop	configure	√
Test / Debug	configuration only	√
Create staff training material / documentation	adapt	√
Train staff	√	√
Integrate into daily work processes	√	√
Provide support		√
Perform regular maintenance (e.g. backup)	√	√

Buy / Build analysis

- What criteria should be considered in deciding to buy or build a solution?

When build?

- The needs are completely unique
- No existing tool comes close
- The solution is simple to develop
- The solution is simple to evolve
- The solution is simple to use

Advantages of COTS*

- The tool exists and already has many of the functions the organization needs or may need.
- The tool can be tailored to the specific needs of an organization.
- The tool is largely debugged.
- The vendor can provide training, user manuals, and ongoing support.
- The vendor is regularly updating and improving the tool.
- There is often a user community around the product which can be a resource for solving problems.

*Excerpted from *Should Nonprofit Agencies Build or Buy a Database?*
<http://www.techsoup.org/learningcenter/databases/page5028.cfm>
(2/21/07)

How to choose a COTS

- Create a decision matrix
 - One axis: requirements
 - Second axis: products
- If decision is non-obvious, create a simple linear model
 - Assign weight to each requirement
 - Assign score to how each product meets each requirement
 - Sum the products
 - See if the outcome “feels right”

Outsourcing

- Outsourcing is an options if:
 - No COTS solution is viable
 - Building is not a viable solution
 - Not the right staff
 - Solution is too big to learn into
 - Solution requires significant expertise
 - Funds can be allocated

Outsourcing task

Task	Your capacity building task	Outsource
Define requirements	√	reduced
Design		√
Develop		√
Test / Debug	Test use	√
Create staff training material / documentation	joint	reduced
Train staff	partial	reduced
Integrate into daily work processes	√	
Provide support		√
Perform regular maintenance (e.g. backup)	plan	