This is a long running and difficult one and often rolls up with my other bubear - you cannot be a IT manager without being a programmer.

WHy not - because sometimes, the hardest dirtiest job you have is 'do I rewrite or not'

Examples situation - California COBOL rewrite, Netscape, http://weblog.infoworld.com/fatalexception/archives/2008 joelonsoftware

It is usually a bad idea to rewrite

Is this a feasible research project? What would the answer be how to break down criteria? How much could be replaced / overlaid etc? in fact its not too bad as research.

IT manager who can program will keep it simple - simple enough to fit in one brain. THis is the limit of complexity - anything more complex and it really cannot be used. Boeing is best example - there are one or two people in Boeing who understand how the whole plane fits together. Every part. They may not be able to tell you the spec of the left hand wing nut 145 but they can tell you that as it is in the rear of the wing and is riveted at 2cm distances it must have a sheering strength of ... let me think, 2.5 times 300Kg, yeah. 47.' SOmeone who understands the system as a whole. Now if boeing decided to put swing wing aircraft with sunroofs and MRI scanners then one person whoule not be able to know enough fundamentals to keep it all in their head. and then there would be no-one who could say 'hold on, that new idea just will not work'

There MUST be, for any single system, one person who understands it all - that is, could recreate it, not from memory but from first principles - who in thoery could sit down and say, well the architecture means I must have a wing light enough to have this Hooks constant, which we decieed was aluminum alloy of X, which means

This person should not be able to create it all himself - but should be able to lay out the specs in enough detail that peers could create the parts and it would all fit. This is the IT Manager - boeing chief engineer

Any higher up (in quotes) and that capability is not there, and so that person should not make decisons about the system. They should and presumably do not decisions about the policital system around that engineering project and this is right - they are a politician.

I guess I am saying managers can only manage that which they can recreate from memory and hold a working compelte model of in their head.

Its a tall order, but without it you can never decide if rewriting or duct tape is the best option