

**Heilmeier's Catechism.** Standard set of questions that he (George Heilmeier, DARPA) expected every proposal for a new research program to answer:

1. **What.** What are you trying to do? Articulate your objectives using absolutely no jargon.
2. **Today.** How is it done today? and what are the limits of current practice?
3. **Novelty.** What is new in your approach? and why do you think it will be successful?
4. **Why.** Who cares?
5. **So what.** What difference will it make? (if you're successful)
6. **Ups and downs.** What are the risks and payoffs?
7. **Cost.** How much will it cost?
8. **Time.** How long will it take?
9. **Success.** What are the midterm and final check points for success?