



Issues associated with insertion and implementation of new surface engineering technologies

HCAT Program Review
Greensboro, NC
March 2005

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE MAR 2005		2. REPORT TYPE		3. DATES COVERED 00-00-2005 to 00-00-2005	
4. TITLE AND SUBTITLE Issues associated with insertion and implementation of new surface engineering technologies				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Rowan Technology Group,1590 S. Milwaukee Ave., Suite 205,Libertyville,IL,60048				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES 25th Replacement of Hard Chrome and Cadmium Plating Program Review Meeting, March 15-17, 2005, Greensboro, NC. Sponsored by SERDP/ESTCP.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 9	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

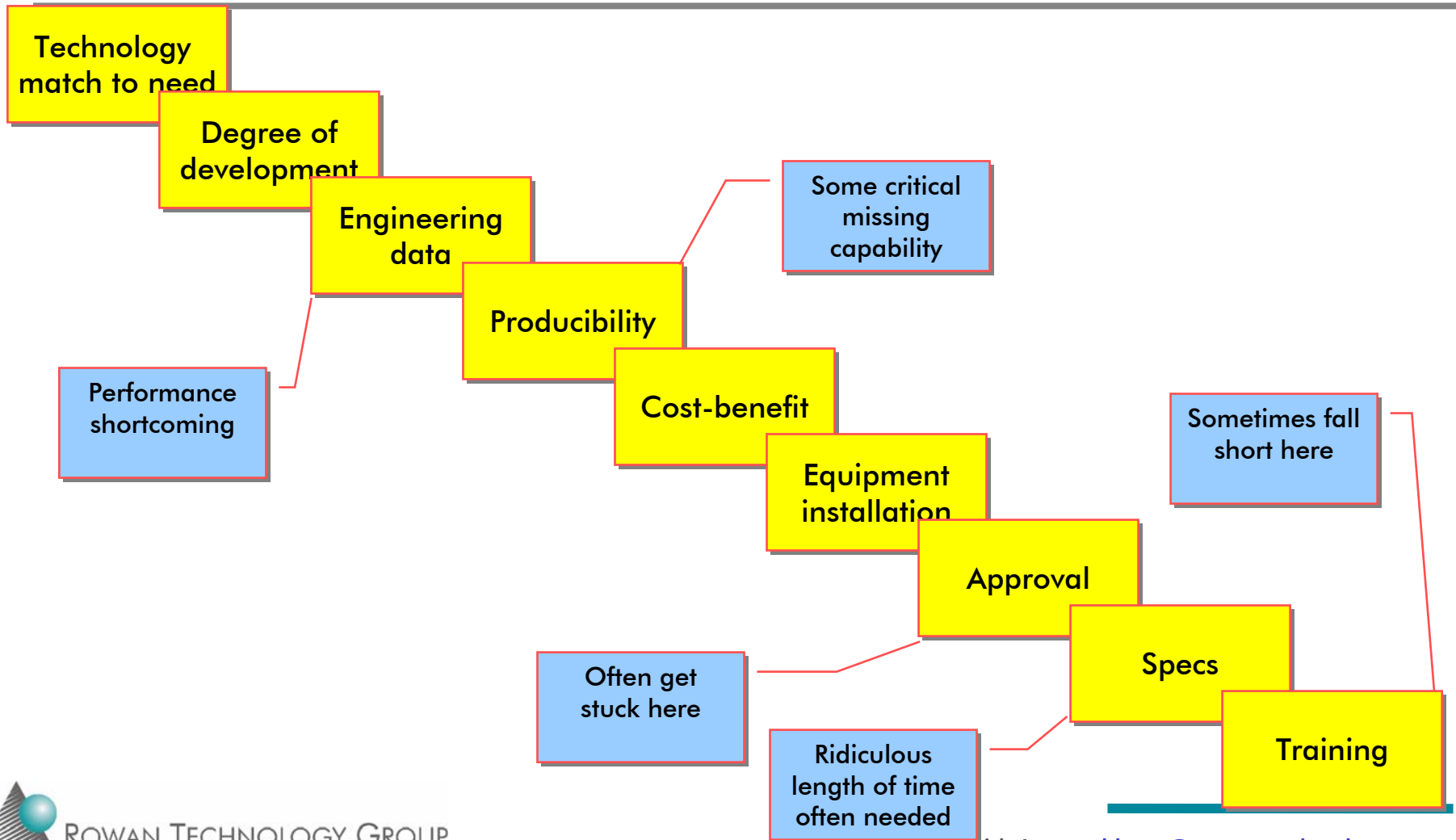
Documents we have on HVOF (landing gear)

And that's just landing gear!

What are we seeing in new programs?

- ❑ A lot of issues we never thought about when doing the validation
 - Using the wrong coating so they get severe counterface wear
 - Spraying into snap ring grooves
 - Having to worry about adhesion on IVD on plasma spray Mo
 - Design engineers unsure of runout
- ❑ For F-35 we are developing Guidelines documents
 - “How I Did It” by Baron von Frankestein, that includes all the details not in the specs
 - Could we do something better?
 - Interactive web-based training?

Where do we have the most trouble?



Minimizing engineering risk

- ❑ How can we best make sure we do not have an important shortcoming in performance or producibility?
 - Finding a problem too late locks us in to a specific set of coating parameters, leaves no money to fix it
 - With new technologies, need to get data up-front at the extremes before launching full JTP
 - How best do that?

Approval

- ❑ Approval is relatively straightforward when the people doing the work are also the decision-makers (Air Force, OEMs)
 - They know all the details of the technology, its capabilities and limitations
- ❑ How can we smooth the approval process for Navy and Army?

Specifications

- ❑ Specs usually have to be internal
 - Takes years and thousands of gray hairs to get industry specs
 - Is there a better way of doing this?

Training

- ❑ Some organizations find themselves in a bind with training
 - HCAT trained OO-ALC through Jerry Schell
 - PEWG supplied training at OC-ALC through Engelhard
 - Training on nCo-P at HAX will be done by close collaboration with Integran and installation of equipment at JAX
 - Same thing presumably for Al-Mn at NADEP NI
 - That all works for the first folks – what about the rest (e.g. WR-ALC)?

Other information and assistance

- ❑ What else is needed? Do we need
 - Guidelines?
 - Formal or informal training?
 - Better way of anticipating technical problems?
 - Better ways of finding the \$\$ for implementation?