Avoiding the OS Phase®

Quality’s Contribution to Avoiding Failure on Projects

Bob Baim - CCE PMP
May 20, 2010

www.avoidingtheosphase.com
Defining the OS Phase

△ The point in time when you’ve overrun the authorized budget or zoomed past the project’s target end date … often without warning anyone ahead of time.

△ Certain clichés come to mind when talking about the OS Phase:
  △ The project hit the wall.
  △ Everything hit the fan.
  △ Holy Bajeezers … our project is hosed!
Recent OS Phase Encounters

- Mattel
- Airbus (A380) and Boeing (787)
- Peanut Butter Corporation of America
- Capital Visitor’s Center
- Toyota
- Port of Anchorage expansion
- Walter Reed National Military Medical Center
- British Petroleum
- Bay Bridge – San Francisco
- Johnson and Johnson
Airbus delays put A380 two years behind schedule

Emirates, biggest buyer of jet, is reviewing 'all options'

By Andrea Rothman
Bloomberg News

Airbus' parent company delayed deliveries of the superjumbo A380 jet for the third time in 16 months, as the plane maker struggles to install wiring, slicing $6.12 billion in earnings through 2010.

Airbus, controlled by European Aeronautic, Defence & Space, said in a statement that production is two years behind its original forecast. It expects to deliver the first plane in the second half of 2007. EADS Chief Executive Tom Enders said Tuesday that Airbus must change "radically" after the delays angered customers and prompted a 29% decline in the company's stock this year. Emirates, the biggest customer for the A380 said Tuesday it's reviewing "all options" on its 45-plane order.

"It's an extremely dangerous time for Airbus. Time is not on their side," said Richard Aboulafia, vice president, Teal Group, a Fairfax, Va.-based consulting company. "If either Emirates or (International Lease Finance Corp.) defect, the consequences will be extremely serious. While the A380 is unlikely to die, you can't rule out total program failure."

Airbus disclosed problems with the A380 on June 13 and slashed its earlier delivery forecast for 25 planes in 2007. Airbus has 159 orders from 16 customers for the plane, which has cost at least $13.5 billion to develop. Airbus is trailing Boeing in orders for the first time in five years.

The A380's delays, first disclosed in June 2005 and again a year later, have angered airline customers, who are demanding compensation, and have also prompted the departure of two top executives and the demotion of the executive who ran the A380 program.

"A year delay to A380 is bigger than anticipated and the earnings and cash costs are essentially proportional to this," said Nick Cunningham, an analyst at Panmure Gordon in London.

EADS also said that to restore its competitiveness, Airbus is launching a "Power8" program to generate annual cost savings of at least 2 billion euros ($2.5 billion) from 2010 onwards. The program aims to speed up development processes and to deliver around 5 billion euros ($6.4 billion) in cumulative cash savings by 2010, EADS said.

"The biggest issue I have with EADS' statement is the brief part about restructuring," said Cunningham.

Airbus blames the A380 delays on the complexity of installing 300 miles of wiring, in each of the double-decker planes. The wires are bundled in harnesses that are strung through the aircraft, controlling in-flight entertainment, lights, air conditioning and the plane's operating systems.

Airbus allowed each customer to customize the entertainment systems, adding to the challenge of getting the correct wire in the right place.
Boeing delays delivery of 787

Outsourced work blamed for 6-month Dreamliner setback

By Marilyn Adams
USA TODAY

On Wednesday, aerospace giant Boeing pushed back delivery of its first 787 Dreamliner until as late as December 2008, delaying its earlier target date by more than six months. It’s Boeing’s worst delivery delay ever.

In a conference call, top Boeing officials blamed the poor quality of some of the outsourced production work and a worldwide shortage of metal fasteners to bolt pieces of the plane together.

Just last month, Boeing postponed initial flight testing of its flagship 787 but said it could deliver the first plane to Japanese airline ANA by May 2008 as planned. On Wednesday, Boeing CEO Jim McNerney said that flight testing will not start until after March 2008. “We are disappointed and deeply regret the impact on our customers,” McNerney said.

The 787 delays have disrupted
# Boeing 787 OS Phase Experiences

<table>
<thead>
<tr>
<th>Status Date</th>
<th>First Flight F/C Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2004 (Announces 7E7 Plane)</td>
<td>August 2007</td>
</tr>
<tr>
<td>January 2007</td>
<td>August 2007</td>
</tr>
<tr>
<td>July 8, 2007</td>
<td>Rolled Plane Out</td>
</tr>
<tr>
<td>September 2007</td>
<td>November 2007</td>
</tr>
<tr>
<td>October 11, 2007</td>
<td>March 2008</td>
</tr>
<tr>
<td>January 2008</td>
<td>June 2008</td>
</tr>
<tr>
<td>April 2008</td>
<td>Delayed 2009</td>
</tr>
<tr>
<td>November 4, 2008</td>
<td>2nd Qtr 2009</td>
</tr>
<tr>
<td>December 11, 2008</td>
<td>By end 2nd Qtr 2009</td>
</tr>
<tr>
<td>May 2009 (CEO James McNerney)</td>
<td>TBD</td>
</tr>
<tr>
<td>June 23, 2009</td>
<td>TBD</td>
</tr>
<tr>
<td>August 11, 2009</td>
<td>First Flight</td>
</tr>
<tr>
<td>December 15, 2009</td>
<td></td>
</tr>
</tbody>
</table>
"Boeing has a habit of saying, everything is fine, everything is fine, until it isn’t. When you don’t have any credibility how much lower can it go?"

Scott Hamilton, Aviation Consultant
USA Today, June 24, 2009
### Myth vs. Reality

<table>
<thead>
<tr>
<th>Myth</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ability of a project manager to manage the news is good.</td>
<td>The <strong>cover-up</strong> must never start.</td>
</tr>
<tr>
<td></td>
<td>If it has …</td>
</tr>
<tr>
<td></td>
<td>… it must stop.</td>
</tr>
</tbody>
</table>

Time spent on managing the news or spin control is wasted.
Construction on the Calif. bridge is billions over budget and years behind schedule. And if a Sept. 30 deadline isn’t met, work could come to a screeching halt.

Holy Bajeepers! Our project is hosed! We’ve hit the dreaded OS Phase!
Contributors to OS Phase

- Underbid / oversold / under-scoped / over “hoped” (Marketing’s fault)
- Poorly executed / unwarranted optimism / lack of accurate forecasting (Guess who gets the blame here?)
- Worthless or non-existent Project Management Information System (It’s the IT organization’s fault)
- Don’t blame it on the people … blame it on the processes (or lack of processes)
### Myth vs. Reality

<table>
<thead>
<tr>
<th>Myth</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects fail.</td>
<td>Projects do not fail…</td>
</tr>
<tr>
<td></td>
<td>…processes fail.</td>
</tr>
</tbody>
</table>

If project processes are not fixed all subsequent projects will fail.
“Disenchantment with TQM is growing. Why? Have Americans once again taken a simple process and complicated it beyond a useful purpose?”

Successful Process Improvement is Achievable If We Keep it Simple, Robert Baim, American Power Conference, April 1993
Avoidance Attributes

- Simple
- Credible
- Predictive
The Avoidance Triangle

Stuff is anything that involves time or cost.

Time

Cost

Stuff

Requirements, Performance, Objectives, Quality ...
Defining the Stuff

Product Stuff

What the customer wants

Project Stuff

What it takes to give the customer what they want

Avoidance Triangle

www.avoidingtheosphase.com
The Avoidance Triangle

△ There must be a well-understood and documented process for capturing and managing all project scope.

△ We need assurance that the status of the scope within that process is …

.... Current
.... Correct
.... Complete
The Avoidance Triangle

△ Estimating the time and costs are easy if you know the scope.
△ An unbalanced triangle is dangerous … and a sign of a management team that lacks maturity
△ Scope is more than something documented in a set of specifications or requirements. It’s everything!
△ Scope, all the way down the WBS and to the project’s schedule activities, is an organized grouping of little triangles.
Work Breakdown Structure

Defining the OS Phase

Avoidance Attributes

Avoidance Triangle

Avoidance Model

Tomorrow

Project

Design

Build

Test

Quality
The Avoidance Model

△ The most important part of scope is having a process to manage it!
△ When a process is in place, we need to assure that the data is adequate and current.
Cost of Capitol visitor center up to $421 million

Project is biggest expansion of U.S. Capitol in its 200 years

By Jim Abrams
The Associated Press

WASHINGTON — There's a hole the size of the federal deficit on the east side of the Capitol as work accelerates on a new visitor center, the largest, most expensive construction project in the 200-year history of the building.

The project has exploded in scope nearly as fast as the 53,000 truckloads of dirt could be removed, driving its cost up from an estimated $285 million to $421 million.

The three-story underground facility is now scheduled to open in the spring of 2006, delayed some four or five years.

Please see CAPITOL, Page A3

Want more information?

➤ Learn more about the U.S. Capitol Visitor Center at the Web site for the project at http://www.noc.gov/cvc/cvc-—overview.htm

Capitol construction project under way

The Capitol Visitor Center project is the largest, most expensive construction project in the Capitol's history. The three-story underground facility is expected to open in spring 2006, with an estimated cost of $285 million a few years ago increasing to $421 million.

Total CVC footprint size approximately 5 acres or 183,000 sq. feet

Construction site perimeter

Capital Visitor Center footprint

SOURCES: The Architect of the Capitol, Associated Press

Project has been marked by delays and climbing costs

The vision: Center spokesman Tom Fontana stands in the center's Great Hall, holding an illustration of what the hall will look like.

Work site: Construction continues on the House side of the visitor center near the Library of Congress. The center was supposed to be finished in 2005.
## Capital Visitor’s Center
### OS Phase Experiences

<table>
<thead>
<tr>
<th>Status Date</th>
<th>F/C Date</th>
<th>F/C $</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2000 (Ground Breaking)</td>
<td>Dec 2005</td>
<td>$265M</td>
</tr>
<tr>
<td>February 2002 (911 Impacts)</td>
<td></td>
<td>$350M</td>
</tr>
<tr>
<td>April 2003 (Architect Forecast)</td>
<td>No clue</td>
<td>No clue</td>
</tr>
<tr>
<td>May 2004</td>
<td>2nd qtr 2006</td>
<td>$421M</td>
</tr>
<tr>
<td>June 2005 (Congress Comm)</td>
<td>March 2007</td>
<td>$559M</td>
</tr>
<tr>
<td>January 2007</td>
<td>1st qtr 2008</td>
<td>$600M</td>
</tr>
<tr>
<td>December 2, 2008 (Opens)</td>
<td>Dec 2008</td>
<td>$621M</td>
</tr>
</tbody>
</table>
“If I knew what this effort was going to cost .... I’d be picking stocks on Wall Street.”

Project Architect
60 Minutes – April 2003
OS Phase Characteristics

- Morale on the team is nonexistent
- Performance reporting is exaggerated
- The survival mode is now routine
- Performance metrics are meaningless
- Re-baselining is a core competency
- Shredder is used continuously
- Forecasting has stopped
## Myth vs. Reality

<table>
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<th>Myth</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers and tools are the fix for Avoiding the OS Phase®.</td>
<td>98% of project management is about dealing with people.</td>
</tr>
</tbody>
</table>

Managing organizational behavior is the key to Avoiding the OS Phase®.
The Avoidance Model

Defining the OS Phase
Avoidance Attributes
Avoidance Triangle
Avoidance Model
Tomorrow

After we know the project’s scope … … we need to know who is involved.

Scope → Process
Status

Roles & Responsibilities → Process
Status
# Responsibility Assignment Matrix (RAM)

<table>
<thead>
<tr>
<th>Responsibility Assignment Matrix (RAM)</th>
</tr>
</thead>
</table>

## Defining the OS Phase

- **Avoidance Attributes**
- **Avoidance Triangle**
- **Avoidance Model**
- **Tomorrow**

## Suggested Symbols

- **P** = Primary preparer (single point of accountability for the entire activity)
- **S** = Primary support to preparer (unlimited)
- **I** = Provides input to preparer(s) (unlimited)
- **E** = Subject Matter Expert (unlimited)
- **L** = Lessons Learned Contributor (unlimited)
- **B** = Backup to primary preparer - P (unlimited)
- **R** = Responsible for reviewing completed product (review only - no signature)
- **C** = Responsible for reviewing completed product and concuring by signature
- **A** = Responsible for acceptance / approval of completed product (only 1 permitted)
- **D** = Receives a distribution copy of completed product (unlimited)
# RAM Assignments

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Primary (Single Point of Accountability)</td>
</tr>
<tr>
<td>S</td>
<td>Support (To Primary Preparer)</td>
</tr>
<tr>
<td>I</td>
<td>Provides Input to Primary or Support</td>
</tr>
<tr>
<td>E</td>
<td>Subject Matter Expert (SME)</td>
</tr>
<tr>
<td>L</td>
<td>Lessons Learned Contributor</td>
</tr>
<tr>
<td>B</td>
<td>Backup to Primary</td>
</tr>
<tr>
<td>R</td>
<td>Review Completed Work (No Signature)</td>
</tr>
<tr>
<td>C</td>
<td>Concur with Completed Work (Signature)</td>
</tr>
<tr>
<td>A</td>
<td>Accepts Completed Work</td>
</tr>
<tr>
<td>D</td>
<td>Receives a Copy of the Completed Work</td>
</tr>
</tbody>
</table>

**Avoidance Triangle**

- **P** = Primary (Single Point of Accountability)
- **S** = Support (To Primary Preparer)
- **I** = Provides Input to Primary or Support
- **E** = Subject Matter Expert (SME)
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The Avoidance Model

△ When Scope processes are in place and working, and
△ Roles and Responsibilities are clearly defined and accepted,
△ The team focus must turn to areas of the project that could cause impacts.
△ That’s where Risks enter the picture.
△ Risks must be managed or they will manage the project.
The Avoidance Model

Scope

Roles & Responsibilities

Risks

Process

Status

Process

Status

Process

Status
Summing Up

- Projects do not fail … processes fail.
- It is vital to ensure all scope, roles, and risk processes are adequately defined and in place. This will be our … Avoidance Model.
- Additionally, ensure that all project management processes are kept simple, credible, and predictive.

Avoidance Attributes
Strategies for Tomorrow

- Educate team members about the OS Phase and how to avoid it.
- Focus on fixing process problems, not covering them up.
- Become a scope – aholic.
- Look for ways to ensure that you and your team are keeping things simple, credible, and predictive.
Can’t Wait to Learn More?

△ For more information – read *Avoiding the OS Phase®* by Robert Baim available only from [www.avoidingtheosphase.com](http://www.avoidingtheosphase.com).

△ Inquire about our two and three day classes on how to develop processes for Avoiding the OS Phase® or contact Bob Baim at [bob@avoidingtheosphase.com](mailto:bob@avoidingtheosphase.com) and learn about our consulting services.

△ Thank you again for your attention.

△ Questions?