WHEN BAD THINGS HAPPEN TO GOOD PROJECTS
STRATEGIES FOR GETTING PROJECTS BACK ON TRACK

2016 Airport Construction Strategy Summit
Panelists

**Robert Ramsey**
Chief Engineer and Vice President Development and Engineering
Nashville International Airport

**Kristen Rectenwald**
Senior Assistant City Attorney
Aviation Division at City of Atlanta

**Steven Wiesner**
Director Airport Development
Broward County

**Frank Giunta** (Moderator)
Senior Vice President and Managing Director
Hill International
Risk Avoidance

“I need a list of specific unknown problems that we’ll encounter.”
### Top 10 Leading Indicators

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The project team is lacking in the necessary expertise, experience, breadth, and depth to successfully execute the project.</td>
</tr>
<tr>
<td>2</td>
<td>The project team is experiencing a high turnover rate and instability in team membership.</td>
</tr>
<tr>
<td>3</td>
<td>The project team’s response to Requests for Information, questions, and changing events that can significantly impact the project results is slow, inadequate, or incomplete.</td>
</tr>
<tr>
<td>4</td>
<td>The project team is losing confidence in the accuracy and validity of the project schedule.</td>
</tr>
<tr>
<td>5</td>
<td>Project milestones are not being met and are consequently jeopardizing future project milestones.</td>
</tr>
<tr>
<td>6</td>
<td>Construction is awarded before adequate completion of project design, including discipline design packages, resulting in an incomplete scope definition at time of award/start of construction.</td>
</tr>
<tr>
<td>7</td>
<td>Business goals, project objectives and priorities, and critical success factors are not being consistently used by project team members and key stakeholders to guide decisions.</td>
</tr>
<tr>
<td>8</td>
<td>Owner and/contractor are requesting an excessive number of contract changes and/or scope changes during project execution.</td>
</tr>
<tr>
<td>9</td>
<td>Significant project scope items are inadvertently omitted from bid packages.</td>
</tr>
<tr>
<td>10</td>
<td>Some project participant companies become financially unstable.</td>
</tr>
</tbody>
</table>
## Why Do Projects Fail?

<table>
<thead>
<tr>
<th>Incomplete Engineering</th>
<th>Poor Project Controls</th>
<th>Poor Contracting Strategies</th>
<th>Inadequate Risk Mitigation</th>
<th>Inadequate Project Governance</th>
<th>Poor Cost &amp; Schedule Estimating</th>
<th>Insufficient Business Processes</th>
<th>Ineffective Information Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feasibility</strong></td>
<td><strong>Planning &amp; Design</strong></td>
<td><strong>Procurement</strong></td>
<td><strong>Construction</strong></td>
<td><strong>Close-out</strong></td>
<td><strong>Operation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project delivery model</td>
<td>Project execution plan</td>
<td>Strategic sourcing and</td>
<td>Technical and commercial</td>
<td>Testing and turnover</td>
<td>Sign-offs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management framework</td>
<td>Project control systems</td>
<td>procurement plan</td>
<td>contract administration</td>
<td>criteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(people, process and</td>
<td>Detailed engineering and</td>
<td>Bid packages and</td>
<td>Licenses and permits</td>
<td>Contractor deliverables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>technology components)</td>
<td>design</td>
<td>technical specs</td>
<td>Cost and schedule</td>
<td>Punch list completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preliminary design</td>
<td>Scope definition</td>
<td>Contract terms and</td>
<td>management</td>
<td>Operational, financial, and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept analysis</td>
<td>Schedule development</td>
<td>conditions</td>
<td>Stakeholder coordination</td>
<td>contractual closeouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor, material, and</td>
<td>Quality plan</td>
<td>Risk allocation and</td>
<td>Change order</td>
<td>Document turn-over</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equipment resources</td>
<td>Stakeholder/ Partner</td>
<td>performance guarantees</td>
<td>management</td>
<td>Claim resolution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>review (high-level)</td>
<td>plan</td>
<td>Validate bid submissions</td>
<td>Quality assurance and</td>
<td>Commissioning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-level business</td>
<td>Audit plan</td>
<td>Negotiate and award</td>
<td>safety</td>
<td>Testing and performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>case</td>
<td>Regulatory strategy</td>
<td>contracts</td>
<td>Invoice validation and</td>
<td>verification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site selection</td>
<td>Detailed business case</td>
<td>Expediting and inventory</td>
<td>cost accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value engineering and</td>
<td>Control budget and</td>
<td>control</td>
<td>Claim management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>constructability review</td>
<td>baseline schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lessons learned review</td>
<td>Regulatory review</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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*Airport Construction Strategy Summit*
*June 8-9, 2016*
Dispute Resolution Continuum

- **COST OF RESOLUTION**
  - Friendly Negotiation
  - PROJECT NEUTRAL®
  - Non-Binding DRB’s
  - Mediation

- **CONTROL OF OUTCOME**
  - Parties Decide for Themselves

- **DEGREE OF HOSTILITY**
  - Third Party Imposes Decision
  - Scorched Earth Litigation
  - Arbitration
  - Special Master
  - Binding DRB’s
  - Admin. Board
  - Mini Trial

**MORE**
- Parties Decide for Themselves

**LESS**
- Third Party Imposes Decision
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John C. Tune Runway Safety Area
John C. Tune Runway Safety Area

- No Fixed Wing Operations for 60 Days
  - Impact on Tenants and FBO
  - No revenue

- Very Aggressive Schedule...Lots of Coordination

- Coordinate with Multiple Parties
  - Operations/Airport Authority
  - Tenants
  - Contractors/Subcontractors
  - FAA
# John C. Tune Runway Safety Area

## Risk Register

<table>
<thead>
<tr>
<th>RNO</th>
<th>Risk or Opportunity</th>
<th>Date Identified</th>
<th>Project Phase</th>
<th>Detailed Description of Risk/Opportunity Event</th>
<th>Action Planned</th>
<th>Responsible for Action</th>
<th>Planned Action Date</th>
<th>Review Date(s)</th>
<th>Status</th>
<th>Status and Review Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Construction Safety</td>
<td>Site specific safety plan</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>In progress</td>
<td>Heart injuries continue to be a concern. Job site is supplied with simple water for hydration. CONTRACTORS recommended that all workers are to be advised of the exposure safety plans.</td>
</tr>
<tr>
<td>2</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Exceeding Construction Schedule - 90 day closure</td>
<td>Affirm monitoring of schedule, High Life</td>
<td>Barton</td>
<td>7/14/2015</td>
<td></td>
<td>Closed</td>
<td>Remaining runway work items will be completed during previously scheduled night closures.</td>
</tr>
<tr>
<td>3</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>NAVD Schedule (Contractor)</td>
<td>Affirm monitoring of schedule, High Life</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Closed</td>
<td>Remaining runway work items will be completed during previously scheduled night closures.</td>
</tr>
<tr>
<td>4</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Design</td>
<td>NAVD Schedule (Pre)</td>
<td>Constant communications from maintenance and monitoring overall schedule</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Critical</td>
<td>Monitoring / testing to complete PMR.</td>
</tr>
<tr>
<td>5</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Implementation</td>
<td>Installation of signage</td>
<td>10/30/2015</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Critical</td>
<td>Monitoring / testing to complete PMR.</td>
</tr>
<tr>
<td>6</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Operational Safety (installation &amp; Back Tailing)</td>
<td>10/30/2015</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Standard</td>
<td>Monitoring / testing to complete PMR.</td>
</tr>
<tr>
<td>7</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Minor Seniors Communications</td>
<td>Installation of signage</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>In progress</td>
<td>Information being posted to website regularly based on schedule.</td>
</tr>
<tr>
<td>8</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Loss of revenue</td>
<td>10/30/2015</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Standard</td>
<td>Monitoring / testing to complete PMR.</td>
</tr>
<tr>
<td>9</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Implementation</td>
<td>Removal of declared obstructions (Opportunity)</td>
<td>10/30/2015</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>Standard</td>
<td>Monitoring / testing to complete PMR.</td>
</tr>
<tr>
<td>10</td>
<td>Risk</td>
<td>11/1/14</td>
<td>Construction</td>
<td>Removal of runway lighting not received in time to complete surface</td>
<td>10/30/2015</td>
<td>Barton</td>
<td>7/23/2015</td>
<td></td>
<td>In progress</td>
<td>Heart injuries continue to be a concern. Job site is supplied with simple water for hydration. CONTRACTORS recommended that all workers are to be advised of the exposure safety plans.</td>
</tr>
</tbody>
</table>

Source: Airliners.net
John C. Tune Runway Safety Area

❖ Subcontractor Lack of Responsiveness
  – Slow Submittal Process
  – No Firm Delivery Dates (Tracking Numbers)
  – Significantly Behind Schedule

❖ General Contractor Corrective Actions
  – Additional Oversight and Coordination
  – Ordered and Paid for Material with Vendors
  – Brought in Additional Subcontractors
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Hartsfield-Jackson Terminal Project
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Construction Observations

→ Bridge Contractor was not able to obtain the Fire Marshal approval to move traffic into the tunnels because the life safety system was not complete.

→ Prevented relocation of the temporary US-1 road, which passed through Area 2C.

→ Impacted the Embankment Contractor’s schedule to install fill and the MSE Wall in Area 2C.
Construction Solutions

➔ Removing the work from the Embankment Contractor’s scope prevented it from being delayed.

➔ Placing the work in the Structure Contractor’s scope put it in control of placing Area 2C embankment and MSE wall, and completing the east wedge and approach slab in order to meet the Runway Paving Contractor’s schedule.

➔ Change Order #6 to the Structure Contractor and Change Order #7 to the Embankment Contractor completed May 2013.
## Schedule For Work Packages

<table>
<thead>
<tr>
<th>Structures</th>
<th>Original</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Wedge Completion</td>
<td>August 1, 2013</td>
<td>October 30, 2013</td>
</tr>
<tr>
<td>East Approach Slab</td>
<td>October 1, 2013</td>
<td>February 22, 2014</td>
</tr>
<tr>
<td>Work Area 2C</td>
<td>N/A</td>
<td>January 31, 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Embankment</th>
<th>Original</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Area 2C and MSE Wall</td>
<td>March 5, 2014</td>
<td>December 15, 2013</td>
</tr>
</tbody>
</table>
EXECUTIVES AND PROJECT MANAGERS AGREE: COMMUNICATION IS CRITICAL

PMI’s 2013 Pulse of the Profession™ report revealed that US$135 million is at risk for every US$1 billion spent on a project. Further research on the importance of effective communications uncovers that a startling 56 percent (US$75 million of that US$135 million) is at risk due to ineffective communications. (See Figure 1)

“The High Cost of Low Performance: The Essential Role of Communications”, PMI’s Pulse of the Profession In-Depth Report, Project Management Institute, May 2013
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Open Discussion