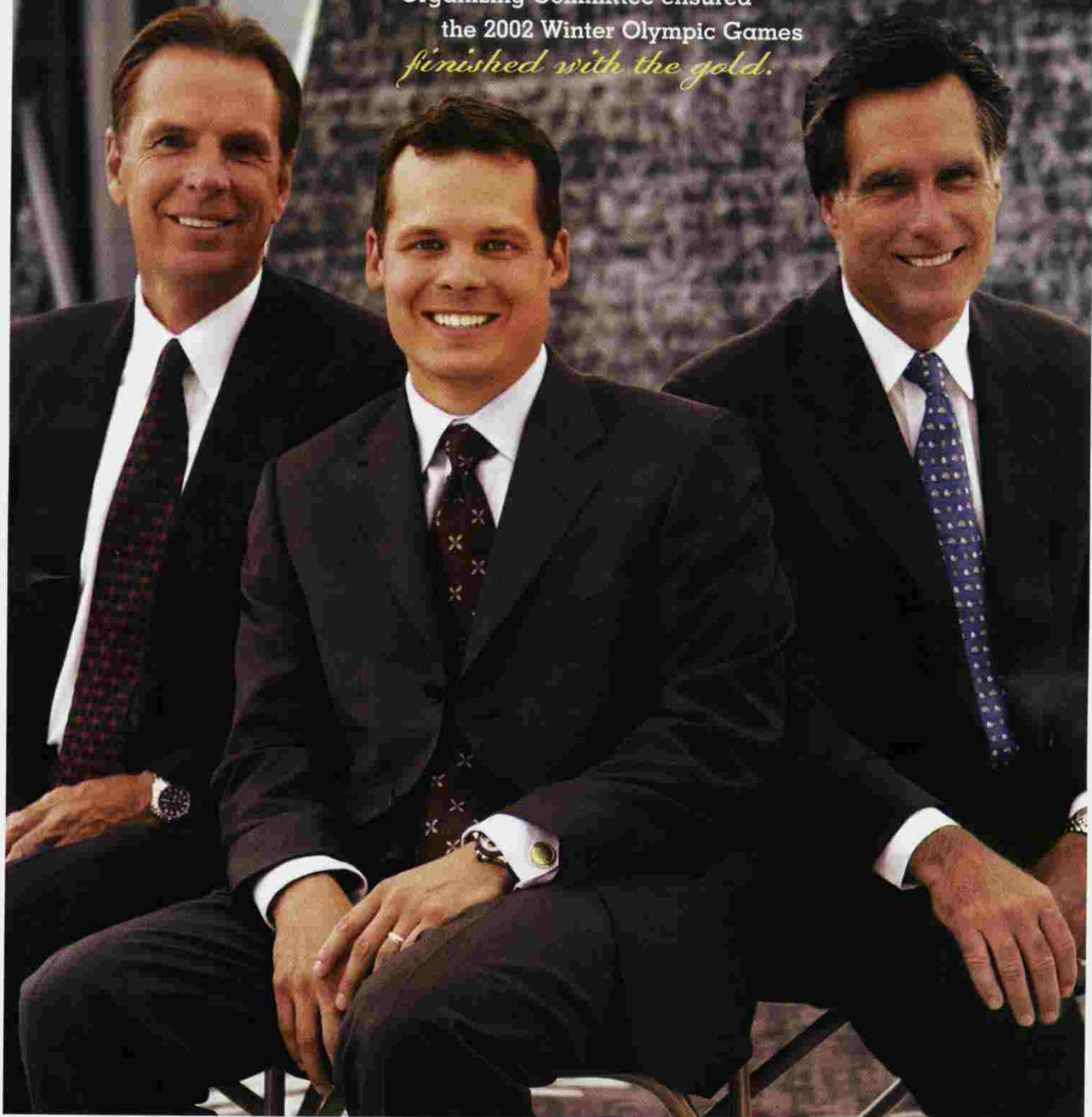


Despite *37,000 tasks*, uncertain project funding and heightened security concerns, the Salt Lake Organizing Committee ensured the 2002 Winter Olympic Games *finished with the gold.*



#### EXECUTIVE SUMMARY

- The 2002 Olympic Winter and Paralympic Games were a resounding success due to project management best practices.
- SLOC employed a software-based system with a cascading color-coded work breakdown structure (WBS) to integrate planning, and once work began, schedulers continued to ensure the Olympics were on target.
- To lessen the impact of unnecessary plan alterations, each functional area director formally requested changes as part of a highly structured process.
- A core budget was complemented by an augmentation budget funded through specific grants or identified cost savings.
- To avoid problems in execution, project managers employed quality circles, tabletops and simulations.

Fraser Bullock and Matthew Lehman, Sorensen Capital, and Massachusetts Gov. Mitt Romney, all of the Salt Lake Organizing Committee.

# THE BEST *Winter* OLYMPICS, PERIOD

BY ROSS FOTI

PHOTOGRAPHY BY LOUIS LESKO

**F**or 27 days in 2002, project managers in Salt Lake City, Utah, USA, held the world in thrall. That's right, project managers.

→ Five years in the making, the \$1.9 billion 2002 Olympic Winter and Paralympic Games were a massive undertaking, encompassing 78 Olympic and 15 Paralympic events. While athletes were the star performers, project managers seamlessly delivered world-class games that, according to the International Olympic Committee, "made a profound impact upon the people of the world."

After the award of the Games to Utah in 1997, the Salt Lake Organizing Committee (SLOC) began coordinating with federal and state agencies to plan needed infrastructure including an I-15 highway expansion, the Utah Department of Transportation's Traffic Operations Center and key highway interchange improvements.

At the start, most Olympic managing directors viewed project management and quality assurance as directly applicable only to large construction-related projects, technical development programs, and other finite and easily quantified activities. "Project management has been embraced at different levels, depending on the Games," says Matthew Lehman, SLOC managing director, operations planning and management, and currently an associate with private equity firm Sorenson Capital, Salt Lake City, Utah, USA. "In our case, it was the

cornerstone. We turned a \$400 million deficit into a \$100 million surplus, and we did it using classic project management tools."

## 37,000 Tasks

→ Four years before the Games, SLOC employed a Primavera software-based system with a cascading color-coded work breakdown structure (WBS) to integrate planning across its 57 functions and 22 venues. Given the scope of the Olympics, developing a schedule and work plans took a year.

"We provided a central resource, meeting with individual department heads to help them download their brain, get an idea of the bucketfuls of work that needed to be accomplished and then break that down into thimblefuls," says Bob Kenniston, SLOC director of operations planning and management, now consultant with Bechtel National, headquartered in San Francisco, Calif., USA.

Once work began, schedulers continued to ensure the Olympics were on target. "The major challenge was, unlike in a construction project where you dig a hole before pouring concrete, with the Olympics project we didn't have discrete tasks that must be done in a certain order," Kenniston says. "If we couldn't complete activity 10, that didn't mean that we couldn't complete activities 11 through 30, especially considering the uncertainty of funding. We were constantly jumping around and finding innovative ways to measure progress."



A year out from the Games, a Venue Integrated Planning Schedule (VIPS) helped the team integrate resource needs, budgets, construction and required operational plans. For example, to control access into and around a venue, the team considered the roads, pedestrian pathways, seating provisions, field-of-play, safety provisions, hospitality areas and roles of the operations staff.

"Through broad application of this approach, cost savings through operations efficiencies measured nearly \$10 million," Lehman says. "In addition, by having the end use in mind, construction improvements were made, resulting in additional operational efficiencies and greater customer satisfaction."

### **Bird's Eye**

To keep executives apprised of progress, SLOC used an Executive Roadmap, an encapsulated, one-page list of the top 100 Games-wide activities. In addition, external partners, including the IOC, law enforcement, the city of Salt Lake and the host broadcaster, were kept up-to-date.

Listed activities tied to detailed project roll-ups within each department's schedule. A 90-day highlighter clearly identified executives accountable for each integrated activity.

"We knew where we were at every point in time and that we weren't missing anything," says SLOC Chief Operating Officer and Chief Financial Officer Fraser Bullock, now managing director at Sorensen Capital. "We knew when we were on and off schedule and where we had to apply additional resources. The interrelation of the functions meant they could not run in isolation—it was a smoothly running machine."

→ With so many interrelated tasks, a simple change could result in massive issues. To lessen the impact of unnecessary

plan alterations, each functional area director formally requested changes as part of a highly structured process:

1. A formal request was submitted to a centralized management and tracking group.
2. The change was evaluated for impact and quantified by the required funding.
3. A formal review of the change request was scheduled for the next available meeting with the requestor, financier and all impacted parties. At this review, the functional area director made a case for the change.

4. Impacted functional areas approved or denied the request. If there was an impasse, the COO would make the final decision.
5. The requestor would be notified in writing of the outcome of the review.

Additionally, detailed quarterly reviews were held in which Bullock, SLOC CEO Mitt Romney (now governor of Massachusetts), the function head/managing director and the project manager would review progress through earned value analysis, making needed course corrections to ensure that each subproject was on track. "In fact, through this management process we were able to save significant dollars, producing a needed contingency fund, which was used to answer unforeseen challenges and in many cases expand our service offering, venue sites and management efforts," Lehman says.

### **Target: Cost Containment**

Despite cooperative planning, three years prior to the Games, SLOC still had a problem: Budget requirements exceeded available funding by \$400 million—with no contingency funds. To address the issue, Bullock led an effort to separate "must-have" from "nice-to-have" items. "As operations person, I knew what we needed and didn't need, so it was easier to pull financial reserves to coordinate and respond," he says.

→ This core budget was complemented by an augmentation budget funded through specific grants or identified cost savings. "Nice-to-have items included what many considered to be essential items if we were to host the Games without embarrassment, such as an Olympic Cauldron, entertainment, food services, a torch relay program and opening ceremonies," Lehman says.

All department budgets were eliminated, and each activity that represented an expense greater than \$2,000 was explicitly funded through the contract management/procurement system and tracked monthly.

Through the application of these techniques, the Olympic Project turned the \$400 million deficit into a \$100 million surplus. "We went through a comprehensive review of the situation to address cost cutting that wouldn't compromise quality," Bullock says. "Our approach integrated well with the planning—we were able to add on some 'nice-to-haves.'"

### **Olympic-Sized Outsourcing**

With 3,780 contracts valued at approximately \$996 million and 7,000 purchase orders, SLOC decided to centralize the procurement function to tightly manage costs and contracts.

"Clearly centralized management offers the tightest control over expenditures and provides the greatest benefit for standardizing goods and services, thus receiving deeper





discounts from key suppliers," Lehman says. "Although, often centralization complicates provisioning for unique needs and slows down the process."

The contract administrator led contract development using an automated system. Individuals could isolate contracts by their stage of development, functional area or work site. Custom reports also allowed staff to track contracts by status (yellow or red for contracts behind schedule) and to summarize contract statistics.

### The Unexpected

To minimize risks, the project management team proactively addressed each possibility through a combination of documented contingency plans, new procedures, quality circle/integration exercises and mitigation techniques.

Categorized by probability and impact, the top 28 contingency plans were discussed and refined at team meetings. After four months, the entire management team was intimately aware of the roles and responsibilities of each impacted party in the event of a Games-wide incident, Lehman says.

Then, the unexpected happened: terrorist attacks with U.S. targets. After 11 September 2001, the threat of terrorism rose to the forefront of planning and construction efforts, requiring the project team to revisit security provisions at each of its 22 venues.

New security requirements necessitated a redesign of parking venues, access restrictions and airport operations.

Most notably:

- Parking, vehicle entry and exits, and level of vehicle screening at every venue was materially changed.

- Transportation was allowed only along protected routes. Every athlete's vehicle was tracked; so if a vehicle went just 20 feet off course, the team knew it.

Overall, the number of people associated with the security requirements added the biggest cost, but the federal government came in to assist in that capacity, Lehman says.

### Accentuate the Positive

With so many project players and key statistics to track, communication overload could have been a major issue without organized, targeted media outlets. Daily meetings chaired by the PMO resolved issues quickly.

Because no commercial system met its internal communication needs, the project management team developed a System for Tracking and Reporting (STAR). Thirty days before, and continuing through the Games, centralized communications were moved to the Main Operations Center (MOC), the center of all information flow in the Olympic theater. STAR allowed state and local government, federal law enforcement and all venues to quickly update operational, security and traffic control centers.

When information had to be disseminated immediately to SLOC staff or external agencies, the MOC issued an "MOC Bulletin," typically via text messages to two-way pagers and mobile phones. Less time-sensitive information



MATTHEW LEHMAN

## AN OLYMPIC SNAPSHOT

**PROJECT:** Olympic Winter Games of 2002, PMI's 2003 Project of the Year

**OWNER/CLIENT:** The International Olympic Committee, Lausanne, Switzerland

**PROJECT BACKGROUND:** The Salt Lake City Olympic Winter Games project included nearly five years of planning that culminated in 17 days of Olympic operations, 10 days of transition from Olympic to Paralympic Games and 10 days of Paralympic operations.

**EXECUTIVE MANAGEMENT TEAM:** A group of 18 managing directors, each accountable for a functional area and the overall management of department-specific project plans

**PROJECT MANAGEMENT ROLES AND RESPONSIBILITIES:** The office of Operations Planning & Management (OPM) was accountable for working to create and maintain departmental project plans and Games-wide integration/critical path project plans. The project manager helped track progress, create detailed action plans for slipping items and work through scope changes (with the managing directors).

OPM continued its centralized communication role throughout the Games by running a communication and coordination office (the Main Operations Center). The effort entailed the integration of 57 SLOC functions, 11 municipalities, state and local law enforcement, the International Olympic Committee, transportation authorities and special government security/management agencies.



## ANY PROJECT, ANY TIME

Lehman says that many best practices used on the Utah Olympics can translate to other efforts, regardless of scale. He advocates:

- Involve senior management, and build tools to help them understand what you do.
- Ensure transparency at the top of the schedule that makes it easy to see the issues and events you're managing as a project office.
- Get the word out. A senior representative must have the time to discuss the plan with both users and staff—spend as much as 75 percent of your time communicating and 25 percent managing.
- Seek input from customers, and incorporate feedback continuously.



was disseminated through *The MOC Daily*, which carried highlights of the games, statistics on key risk factors and a daily weather update.

At the end of each day, STAR would summarize the functional area's open and recently closed issues automatically. The function manager would provide key statistical information by attaching a preformatted Excel spreadsheet. During the Olympics, the MOC also e-mailed statistical reports daily for 47 key Olympic and Paralympic operational variables to more than 200 command and management personnel.

### Step Right Up

SLOC experienced a special workforce hurdle: More than 40 percent of the staff were unpaid volunteers, with 80 percent brought in only one month before the Opening Ceremonies.

To be considered for the Games, volunteers had to commit to the entire 17-day Olympic period or 10-day Paralympic period, work a minimum eight- to 10-hour shift each day, attend training sessions up to one year prior to the start of their assignment and work under extreme weather conditions. Not to mention, Utah had only a 2.9 percent unemployment rate.

SLOC focused its recruitment message on the "once-in-a-lifetime opportunity." The media campaign was enormously

successful, yielding 68,000 actual applications. Focusing on eight desired behavioral characteristics, 250 volunteer interviewers met 45,000 candidates, who were required to pass a criminal and driving record background check.

To minimize attrition, SLOC awarded perks such as tickets to the Opening Ceremonies rehearsal, Olympic Medals Plaza presentations, after-Games party, gifts at completion of shift thresholds, a "Finish Line" package and inclusion on the "Wall of Honor" at the Olympic Legacy Plaza in downtown Salt Lake City.

As a result of the detailed planning, the project experienced only 0.8 percent attrition among volunteers as compared to 20 percent to 25 percent during the Sydney and Atlanta Games.

### Talk to Me

In August 2001, the project management team began meeting with representatives from critical customer groups, including athletes, broadcasters, press, volunteers, spectators, sponsors and National Olympic Committees to review details of the plan.

→ The project management team designed and conducted a two-part series of "tabletops" for all critical venues. During each tabletop, the management team discussed three to five scenarios. "By articulating processes and likely responses to an issue around a table of participants, key venue

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management personnel uncovered holes in their plans and found poorly defined processes and opportunities for inter-departmental communication improvements," Lehman says.

After discussing two to three scenarios, the project management facilitator debriefed the participating team, and the project management team then tracked issues—which numbered in the hundreds—through resolution over the next few months.

In addition to the discussions, SLOC employed a simulation concept that proved successful during the 1994 Lillehammer, Norway Olympics. The day-long simulations put key venue management and law enforcement personnel into their Games-time role testing venue sites, processes equipment and communication procedures.

Petter Ronningen, Lillehammer Olympics chief operating officer, was flown in to help implement the overall simulation concept, and Bente Kristin Malmo, chief architect of simulations for Lillehammer, worked with David Cummins, ACS Inc., Dallas, Texas, USA, director of operations planning and management, who served as SLOC's director of operations planning and management. "We looked at risk factors from other games so we could include them in our contingency requirements," Lehman says.

At each simulation, quality circles formed at the conclusion of the morning and afternoon sessions to identify problems and develop an action list for the team. "Simulations proved to be the single largest factor in ensuring that on day one, operations worked as planned and that the Games management personnel had experience addressing potential contingency situations," Lehman says.

#### **The Finish Line**

Despite challenges, the Salt Lake City Olympic Winter Games provided a \$76 million grant to fully fund the ongoing operations of the three world-class facilities now being used as training venues for future Olympians.

In addition, SLOC is building Olympic Legacy Parks, museums and other facilities that provide a permanent remembrance and ongoing learning opportunities for the residents and visitors of Salt Lake City. SLOC completed payment to most vendors within nine months, whereas in other games, it took as long as six years, Bullock says. "Because of extensive planning, we knew exactly what was left to be done and completed it in almost an Olympic-record timeframe." **PM**



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