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Second Edition

Stakeholder Management in Large Engineering
& Construction Programs
by Bob Prieto

Stakeholder Management in Large Engineering & Construction Programs [1, 2]

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Large engineering and construction programs require the owner and his program manager to undertake more expansive stakeholder programs than what might be traditionally experienced even on the largest single construction projects. This more expansive approach is driven by the growth in scale and complexity often represented by these programs but also by the fact that different constituencies and stakeholder groups may have different views and interests as it relates to the various projects comprising the program.

For example, the decision to minimize certain construction impacts by constructing modules at a remote location may run counter to local job creation objectives of another constituency or regional labor organization.

In undertaking stakeholder management in large programs it is necessary for the program manager to undertake a structured process and equally important, ensure that the roles, responsibilities and efforts on individual projects meet program standards and objectives and are well coordinated.

We may view the stakeholder management program as consisting of six principle steps. These steps include:

Step 1 - Stakeholder Identification

Step 2 - Stakeholder Mapping

Step 3 - Stakeholder Issues

Step 4 - Stakeholder Objectives

Step 5 - Stakeholder Engagement

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[1] Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally published in *PM World Today* in October 2011. It is republished here with the author's permission.

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Step 6 - Stakeholder Management

Apportionment of responsibilities between the owner organization (including his Program Management Office), the program manager and project contractors will vary but the following table provides a typical apportionment of responsibilities between the owner/program manager and the project contractors.

Stakeholder Management Responsibilities		
	Owner/Program Manager	**Project Contractor**
Stakeholder Identification	Key stakeholder identification utilizing a structured framework for stakeholder group identification; initial identification of individual project level stakeholders; identification of cross program stakeholders based on project input.	Complete identification of project level stakeholders consistent with program requirements established by the program manager.
Stakeholder Mapping	Construction of one or more relationship maps among the stakeholders identified during the stakeholder identification process. Typical relationship maps will address the owner's organization; governmental agencies and authorities; financial and investor groups; key external stakeholder groups.	Extension of program manager developed relationship maps and construction of new maps as required to understand how individual stakeholders relate to the various project elements and to each other.
Stakeholder Issues	For each stakeholder a clear identification of major issues of potential interest to them is compiled and a cross program master issues list is constructed.	Issue identification is carried down to a more granular level by the individual projects including identification of areas of particular concern.
Stakeholder Objectives	An initial survey of what stakeholders are trying to accomplish either in the way of program or project outcome or avoided	Refinement of initial stakeholder objectives based on a specific project level view and subsequent

	concerns will be identified initially by the program manager and refined through the stakeholder engagement process and feedback from project level contractors.	engagement with various stakeholder groups.
Stakeholder Engagement	Identification and confirmation of the level of effort to be assigned to each stakeholder group and the preferred form of engagement and associated frequency.	Confirmation of the selected stakeholder engagement approach and implementation in conjunction with the program manager.
Stakeholder Management	Overall program coordination and management; cross program engagement strategies; emerging issues tracking, reporting and strategy development.	Engagement with project level stakeholders based on agreed to strategy with the program manager and consistent with apportioned responsibilities.

Key Steps in Stakeholder Management

The key steps in the overall stakeholder management process are discussed in the following sections. These activities and their effectiveness can have as much to do with shaping overall program success as the "hard" engineering, procurement and construction activities undertaken.

They need to have the highest level visibility and recognize that different people respond to different communication approaches at different rates. The role of the program manager is to develop the most effective strategies given the desired program outcomes and then to insure that the strategies are implemented in a coordinated way across the various projects comprising the program. As always the program manager must be vigilant to the issues which may lie within the white spaces between the various projects as well as potential "black swan" type issues which may emerge from well outside the program's horizon.

Step 1 - Stakeholder Identification

Stakeholder identification represents the first step in the overall stakeholder management process.

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The program manager undertakes key stakeholder identification utilizing a structured framework for stakeholder group identification. One such framework for stakeholder identification is illustrated in the following table.

Stakeholder Groups	
Stakeholder Category	**Candidate Stakeholders**
Program	Program Executive Sponsors
	Program Manager
	Program Management Advisory Boards
	Program Management Team Members
	Program Staff
	Project Managers
	Project(s) Managers
	Project Team Members
Contractors	Contractors
	Key Suppliers
	Operations Management
Oversight	Program Management Office
	Owner Functional and Corporate Organizations
	Owner's Board Of Directors
Financial	Equity Investors
	Debt Providers
External	Local Community Groups
	Special Interest Groups
	Labor Organizations and Trade Unions
	Media
Government	Regulators at All Levels
	Government Agencies
Customer	Customers or Facility Users

This stakeholder identification process is carried out both at the program level as well as at the project level with the program manager developing an initial identification of individual project level stakeholders.

Based on this initial project level stakeholder identification, the program manager identifies an initial set of cross program stakeholders which will be subsequently refined based on project inputs.

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The program manager carefully defines the level of detail and characterization required by the various projects of the stakeholders acting upon their individual efforts.

Project contractors then complete identification of project level stakeholders consistent with program requirements established by the program manager.

An example of one approach to cross program stakeholder identification effort can be seen in the following example from a large public transport program.

External Stakeholder Identification Matrix							
Stakeholder	**Rank (TBD)**	**Programmatic**	**Metro**	**Tram**	**Bus**	**Water Transport**	**Key Focus or Issues**
Executive Board							
General Secretariat							
Management and Project Board	*						
Executive Affairs Authority							
Council for Economic Development	*						
Urban Planning Council	*						
Department of Finance							
Department of Planning & Economy							
Department of Municipal Affairs							
Department of Municipal Affairs - Municipality #1	*						
Department of Municipal Affairs – Municipality #2	*						
Airports Company							
Chamber of Commerce							
Culture and Heritage Authority							
Electricity & Water Authority							

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Taxi Transport Regulation Centre							
Tourism Authority							
National Exhibitions Company							
National Oil Company							
Ports Company							
Sewerage Services Company							
Government Owned Properties Company							
Large Property Holding Company #1							
Large Property Holding Company #2							
Critical National Infrastructure Authority							
Large Property Holding Company #3							
Department of Planning and Economy							
Environment Agency							
National Utilities Holding Company							
Police							
Health Authority							
Fund to Develop SMEs							
Ministry of Economy							
Ministry of Labor							
Ministry of Planning							
National Transport Authority	*						
Rail Planning Committee	*						
Road and Transport Authority Municipality #2							
Roadway, Transportation and Traffic Safety Research Center	*						

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Center of Waste Management							
Urban Planning Council	*						
Active Contractors & Suppliers							
General Contract & Supply Community							
General Public							
NOTES							
* Candidates for Initial External Stakeholder Meetings							

Step 2 - Stakeholder Mapping

Having identified the universe of potential stakeholders, the program manager must now seek to understand how these stakeholders may relate nor only to the program but also to each other. Stakeholder groups with conflicting and complementary objectives must be understood. Stakeholders who provide tacit leadership or financial support to one or more of the stakeholder constituencies must also be recognized in order to design appropriate stakeholder messaging and engagement programs.

Construction of one or more relationship maps among the stakeholders identified during the stakeholder identification process provides an effective tool for understanding these inter-relationships. Typical relationship maps will address the owner's organization; governmental agencies and authorities; financial and investor groups; key external stakeholder groups. An example of one such relationship map is illustrated below.

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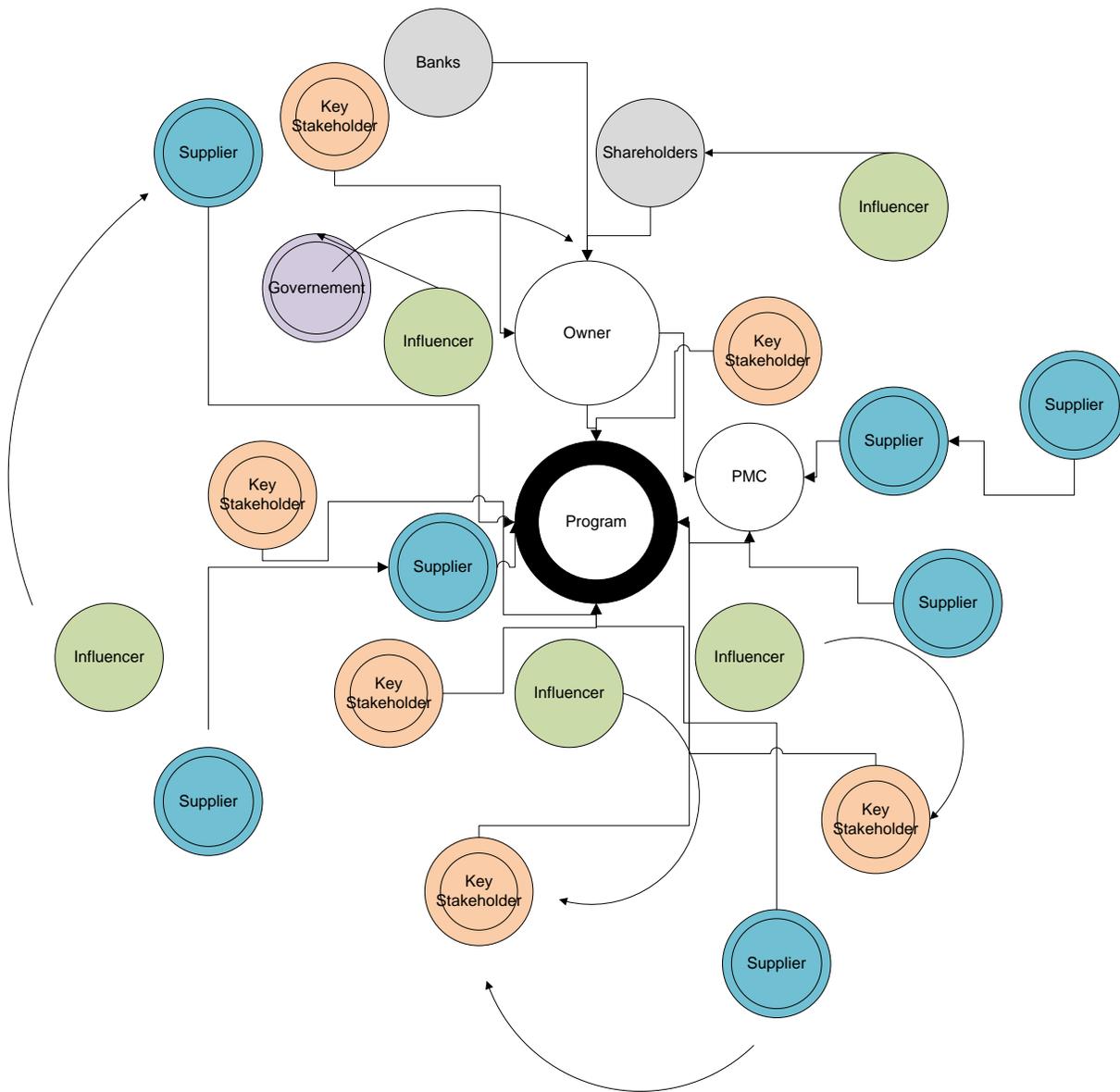
Stakeholder Map shows the program and Owner and PMC relationship to it and each other. Key stakeholders are shown as well as influencers. As you can see in the map, stakeholder's interests and relationships are interlinked. Proximity to the program or other players indicates the relative importance of the particular relationships.

Other relationship mapping techniques exist and include:

- classification of stakeholders based on:

  o power to influence

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- o stakeholder's relationship with the program
  - o importance of their issues on to the program

- mapping stakeholder expectations based on:
  - o value hierarchies
  - o Key Results Areas (KRAs)
- ranking stakeholders based on:
  - o needs (vs. wants)
  - o importance to other stakeholders
- ranking stakeholders by their:
  - o threat potential
  - o potential for cooperation

Various graphical presentation have been developed and include two dimensional n x n matrices such as the 2 x 2 influence-interest matrix shown below as well as three dimensional models (power, interest and attitude; Murray-Webster and Simon 2005) and radial models (The Stakeholder Circle; Bourne 2007).
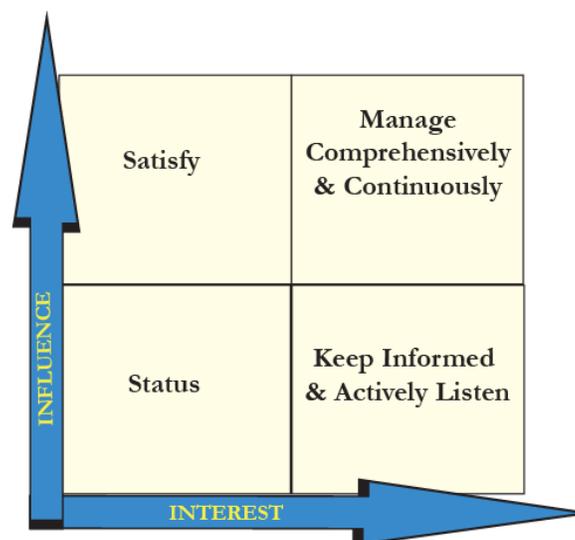
A third dimension may be introduced into the more traditional 2 x 2 matrix through color coding of stakeholders or variance of the circle sizes locating them in this 2 x 2 space.

Dimensions against which evaluation of stakeholders for purposes of mapping may incur can include:

- Interest (high, low)
- Influence (high, low)
- Power (high, medium, low)
- Support (positive, neutral, negative)
- Need (strong, medium, weak)

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Step 3 - Stakeholder Issues

Having identified the stakeholders potentially influencing the performance and outcomes of the program, it is essential for the program manager to understand the various issues which may be important to each of the individual stakeholders. The identification of likely stakeholder issues can be accomplished through a variety of techniques and most large programs require the use of one or more approaches given the typically broad set of stakeholders involved.

Issue identification approaches include:

- Position statements previously prepared by the stakeholder group

- Research on prior stakeholder engagements; press releases; public statements

- Survey of any fund raising literature

- Surveys of potential stakeholders around typical major issue areas

- Stakeholder interviews

- Single or multi-stakeholder workshops

- On-line forums

- Moderated blogs

Issues can be categorized and relative importance assessed. Where possible the core drivers should be identified so that they may be monitored through the program's life-cycle. For example, a stakeholder group concerned with groundwater quality will become more active if major groundwater impacts are realized elsewhere as a result of broadly similar activities to those undertaken in the program being managed.

In particular, the program manager must understand issues of interest to multiple stakeholders.

Step 4 - Stakeholder Objectives

An initial survey of what stakeholders are trying to accomplish either in the way of program or project outcome or avoided concerns will be identified initially by the program manager and refined through the stakeholder engagement process and feedback from project level contractors.

The identification of stakeholder issues sets the stage for determining the objectives each stakeholder would like to see achieved as a result of the programs implementation. In

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determining these various objectives, it is important to ascertain when a minimum outcome is dictated by externalities such as regulation, politics, or targeted rates of return as examples.

Stakeholder objectives must be focused of "needs" versus "wants".

It is important to recognize that stakeholder objectives compete not only with the maximization of financial returns measured on a discrete project or program basis but also with each other. This last point is often overlooked. It may not be possible to satisfy all stakeholder objectives even if we were committed to.

With respect to the competition of stakeholder objectives with a program's financial returns it is necessary to ensure we are looking at full life cycle returns. Meeting stakeholder objectives should act to maximize these long-term returns compared to what the situation would be in the absence of satisfying these objectives. This drives us to a more rational framework for evaluating and responding to the objectives of each stakeholder.

For example, when dealing with a regulatory authority, failing to meet their bona fide regulatory objectives could result in denial of a construction or operating permit. Such a situation does not result in attractive financial outcomes.

Step 5 - Stakeholder Engagement

Identification and confirmation of the level of effort to be assigned to each stakeholder group and the preferred form of engagement and associated frequency need to be established by the program manager.

Early engagement with stakeholders helps set the stage for a constructive process through out the entire program execution process. Stakeholder engagement can begin in the earliest stages of issue identification at the program level and then be built upon as the program is developed and ultimately implemented through a series of projects.
Proactive engagement allows surprises, issues and problems to be addressed within a framework in which a high level of trust exists. Contrast this with the reactive situation where first engagement takes place around a problem or crisis.

Programs should scale their stakeholder engagement strategies relative to the risks and impacts the program and its various projects are likely to create. There is no one-size-fits-all approach when it comes to engagement. Stakeholder mapping such as the Influence-Interest grid can provide guidance on selection of engagement strategies as reflected in the following table.

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Stakeholder Engagement Strategy Guidelines		
Influence	**Interest**	**Strategy**
High	**High**	**Manage Comprehensively and Continuously** Engage these stakeholders comprehensively and manage engagement and relationship continuously. Include in both general program communications sent to broad stakeholder constituencies. Complement with targeted communications focused on their individual issues. Meet with regularly.
High	**Low**	**Satisfy** Respect degree of influence these stakeholders can bring to bear. Engage and build relationship so they may assist in areas where the program manager's control or influence is not sufficient in and of themselves. Include in regular program communications Meet with periodically to establish relationship as an ally in case required in the future. Build trust and seek their counsel.
Low	**High**	**Keep Informed and Actively Listen** These stakeholders have significant ability to influence program schedule (execution efficiency) and emphasis should be on motivation. Include in regular program communications Actively solicit program feedback, suggestions for improvement and areas of concern for the program

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		Survey and solicit feedback on communication approach and effectiveness and adjust communication methodology as appropriate based on feedback Demonstrate you are listening to what they are saying
Low	**Low**	**Status** Include in regular program communications

Like any program function, stakeholder engagement needs to be managed and driven by a well-defined strategy. Clear objectives must exist together with a timetable, budget, and allocation of responsibilities.

Good stakeholder engagement programs are characterized by:

- **Timely and Comprehensive Information Disclosure**
  - factual information
  - earliest possible disclosure
    - understand timing related risks
  - readily accessible
  - respect for sensitive information
  - structured to facilitate engagement

- **Early and Ongoing Stakeholder Consultation**
  - founded on well developed and communicated plan
  - consultation well defined
    - purpose
    - any pre-conditions for consultation
    - affected stakeholders
  - issues prioritized
  - carefully selected engagement methodologies
  - clearly identified responsible individuals both within the program and project levels
  - document consultation process, feedback and actions and feedback to stakeholders

Stakeholder Engagement Best Practices
Emphasis placed on those stakeholders most directly affected by the program or respective projects
Early engagement fosters key issue identification and assessment of the impacts they could have on both overall

program outcome achievement as well as project objective accomplishment

Early dissemination of fact based, comprehensible information

Information context, language and methods of display reflect appropriate cultural sensitivity

Engagement is conducted as a two-way process fostering exchange of information and views

Active listening is practiced

Gender inclusive approaches are utilized, reflecting different needs, concerns and views

Recognize that all communication is local and reflect local communication methodologies, language, context, real or implied hierarchies

Recognize a different "sense of time" may exist at each of the various program locations

- **Stakeholder Negotiation and Building of Partnerships**
    - well defined framework for determining when negotiation is appropriate
    - involvement of empowered representatives
    - engagement free of intimidation
    - mutual agreement on key issues
    - full disclosure of complete relevant information
    - participatory not adversarial negotiation approach
    - negotiating style focused on building partnerships
    - sufficient time for decision-making
    - sensitivity for cultural differences
    - flexibility, consideration of multiple options
    - commitment to compromise
    - agreed to and documented outcomes
    - establish basis for strategic partnerships

- **Timely Concern or Conflict Management**
    - well established process discussed with stakeholders before issues arise
    - process formalized, documented and communicated

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- o provisions for third party involvement
- o timely
- o transparent
- o documented and reported back to stakeholders
- o preserve legal remedies

- **Stakeholder Involvement in Program and Project Monitoring**
    - o promote participatory monitoring of program activities related to key issue areas
    - o evaluate use of third party monitors to add credibility to program actions

- **Feedback to Stakeholders in the Principal Areas of Interest to Them**

    - o pre-identified (and agreed to) information, format and frequency

    - o report on overall stakeholder management program

    - o consider international standards for reporting stakeholder engagement

International Standards For Reporting Stakeholder Engagement
AA1000 Stakeholder Engagement Standard
Dow Jones Sustainability Index
FTSE4Good Index Series
Global Reporting Initiative (GRI)
Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises
SA 1000
UN Global Compact

Step 6 - Stakeholder Management

Responsibilities of the program manager in stakeholder management typically include:

- Overall program coordination and management

- Cross program engagement strategies

- Emerging issues tracking, reporting and strategy development

- Mentoring, developing and coaching project level contractors on stakeholder management

- Comprehensive stakeholder identification and identification of emerging and exiting stakeholders

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- Comprehensive issue identification and tracking of issues and concerns to identify emerging, migrating and exiting issues and concerns

- Relationship building with key program level stakeholders

- Design and leadership of stakeholder communication and engagement programs

Project level contractors complement the program manager led effort by:

- Engagement with project level stakeholders

  o based on agreed to strategy with the program manager

  o consistent with apportioned responsibilities.

- Stakeholder and issue tracking at the project level

- Implementation of program strategies for stakeholder engagement and issues management among project level stakeholders

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Bob Prieto is a senior executive effective in shaping and executing business strategy and a recognized leader within the infrastructure, engineering and construction industries. Currently Bob heads his own management consulting practice, Strategic Program Management LLC. He previously served as a senior vice president of Fluor, one of the largest engineering and construction companies in the world. He focuses on the development and delivery of large, complex projects worldwide and consults with owners across all market sectors in the development of programmatic delivery strategies. He is author of nine books including "Strategic Program Management", "The Giga Factor: Program Management in the Engineering and Construction Industry", "Application of Life Cycle Analysis in the Capital Assets Industry", "Capital Efficiency: Pull All the Levers" and, most recently, "Theory of Management of Large Complex Projects" published by the Construction Management Association of America (CMAA) as well as over 800 other papers and presentations.

Bob is an Independent Member of the Shareholder Committee of Mott MacDonald and a member of the board of Dar al Riyadh. He is a member of the ASCE Industry Leaders Council, National Academy of Construction, a Fellow of the Construction Management Association of America and member of several university departmental and campus advisory boards. Bob served until 2006 as a U.S. presidential appointee to the Asia Pacific Economic Cooperation (APEC) Business Advisory Council (ABAC), working with U.S. and Asia-Pacific business leaders to shape the framework for trade and economic growth. He is a member of the Millenium Challenge Corporation advisory board where he had previously served. He had previously served as both as Chairman of the Engineering and Construction Governors of the World Economic Forum and co-chair of the infrastructure task force formed after September 11th by the New York City Chamber of Commerce. Previously, he served as Chairman at Parsons Brinckerhoff (PB) and a non-executive director of Cardno (ASX)

Bob serves as an honorary global advisor for the PM World Journal and Library and can be contacted at rpstrategic@comcast.net.