

**WEARERS OF MANY HATS: MATCHED FUNDING and OPPORTUNITY
COSTS IN PUBLIC PROCUREMENT - LEADING THE WAY BY DOING
MORE WITH LESS**

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ABSTRACT. Amidst real capacity constraints, both human capital and financial resources, the expertise and skill sets required by public procurement will be critically tested more than at any time in the evolution of the profession. Simultaneously, increasing demands for funding both capital projects and ongoing operations ranging from infrastructure and community services to education and emergency response will force practitioners to emerge as newly integrated transformational-transactional leaders. Facing headwinds of competing political interests and influences, this paper proffers a matched funding methodology and incorporation of opportunity as leading financial considerations for public procurement professionals to consider when calculating benefits/(costs) for their public organizations. Universally applicable social, political, economic, environmental, and financial factors are examined, providing an effective program evaluation for public procurement professionals. Matched funding provides additional insight into the true opportunity cost of funding, thereby, serving as a pragmatic mechanism for procurement management.

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INTRODUCTION

The purpose of this paper is to provide a better understanding of the importance, functions, and benefits attached to leveraging financing through matched funding while simultaneously lowering the all-in cost of financing. The paper adds originality and value to the literature on the matched funding process but is significant because of its focus on incorporating costs/benefits of opportunity financing.

From a practical perspective, application of the discipline of incorporating matched funding and opportunity into the decision making process undertaken by procurement professionals within municipalities, states, provinces, and other public sector entities, can lead to better informed decisions, stakeholder engagement, intergovernmental and taxpayer satisfaction . Notwithstanding the foregoing, achieving efficiency and performance measurements are set against a political backdrop whereby, achieving transparency through information asymmetry often impedes or tempers implementation. However, through incorporation of the matched funding and opportunity framework into the procurement and finance decision making process, presented herein, outcomes and implications can, over time, lead to a greater degree of certainty in the policy process.

Definitions abound regarding opportunity and matched funding. However, for the purposes of applied procurement research, I have used the following definition of both matched funding and opportunity because of its universal appeal. Matched funding can be defined as money promised as well as funds that will be supplied in an amount matching the funds available from other sources. Cash-in-hand, finances, borrowed funds, discretionary funds, as well as other funding sources are garnered from and provided by nonprofit, nongovernmental organizations (“NGOs”), private, and public sectors. All of these funding sources lead to the stipulation set by a grant-providing body or a financial intermediary that the recipients of a grant or loan or financing raise a certain percentage of the money they require, generally a sum more or less equal to that of the sum of money being granted. In other words, multiple participants, in a

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collaborative process, provide sources of funding, involving risk-return relationships, for certain initiatives.

A point of critical thinking needs to be interjected. Absent the potential for matched funding, a double impact of opportunity costs can be forgone.

Upon considering the increasing financial and human resource capacity constraints befalling municipalities worldwide, procurement officers and finance and operations executives are particularly compelled to seek innovative methods for underwriting projects and public works, securing supplies and providing services to their respective communities (Aschhoff & Sofka, 2009). Extant literature indicates that procurement executives are seeking to 'do more with less' especially within the public works and infrastructure sectors both domestically (United States) and globally as the financial resources available are limited, thus compelling managers to find creative ways of securing such financing.

One of the primary challenges faced by both public and private sector organizations is the often unused and overlooked discipline of incorporating the cost of opportunities foregone into a decision making process. Opportunity costs are the costs forgone alternative in order to pursue a certain action. Additionally, opportunity costs represent the next highest value for money alternative. Furthermore, opportunity costs are one component and represent the most elusive costs comprising economic costs. Economic costs include total costs (fixed costs plus variable costs) plus average costs (average fixed rate plus average variable costs) plus marginal cost, transaction costs, sunk costs, accounting costs and finally, opportunity costs.

Deriving an 'all-in' true cost of conducting financial operations, generally, and procurement functions, specifically, are often rife with politically charged minefields. Although, a review of the literature confirms that regarding rulemaking, certain scholars, notably Lowi, have expressed preference for legislation that focuses less on generalities and more on specifics (Kerwin & Furlong, 2011). Granted, in the world of the practitioner, the omnipresence of often

competing political agendas does exert influence on the ultimate procurement decision. [As the author, I believe I would be remiss in not pointing this out to practitioners and thus would be presenting an exercise that can be stigmatized as purely academic]. However, by incorporating matched funding and opportunity into a public finance calculation of net social benefits/(costs) than a true, all-in value for money discipline may provide greater transparency.

METHODS

The design and methodological approach that the paper draws upon includes an analysis both of the costs and funds required by listing benefits and drawbacks associated with five factors including social, political, economic, environmental, and financial.

finally, opportunity costs. Classic economic theory of opportunity costs posits that opportunity can be calculated representing four distinct categories – mutually exclusive economic alternatives

- selected/desired alternative
- next best alternative
- eventual decision

Several questions highlight the criticality of factoring in the opportunity costs associated with matched funding in public procurement activities and undertakings. Moreover, I argue that the criticality of matched funding and opportunity is becoming increasingly acute, due to several factors:

> increasing directives and treaty conditions emanating from multi-governance bodies.

For example, recent European Union directives pertaining to public procurement activities and implications on the awarding of public sector service contracts.

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Some of these questions include the following:

- Does the calculation of a net present value (“NPV”) on the isolated opportunity costs of matched funding in public procurement produce a positive externality?
- Can we incorporate matched funding into lean thinking? (Lean Thinking being an expression generally used in project management)
- Does matched funding meet the seven goals of public procurement?

The goals of public procurement are as follows:

1. Cost
2. Quality
3. Timeliness
4. Risk management
5. Accomplishment of social and economic objectives
6. Maximizing competition, and
7. Maintain integrity and transparency.

Generally, matched funding provides three sources for public entities to secure including private equity in the public private partnerships and privatization efforts; nonprofits and NGOs in triangular relationships and collaborative governance, and intergovernmental including state, local – municipal and county, and federal governments. Additionally, the availability of international and global institutions such as the World Bank, development banks, and other trade and financial institutions increasingly assuming a significant role in advancing policy emanating through public procurement. Ironically, as a commitment to more transparency evolves in the fields of public procurement tradeoffs often arise regarding pursuit of community based economic development and foreign access to the procurement officer’s jurisdiction.

The methodology raises a number of questions pertaining to the use of matched funding and opportunity within public procurement, including the following:

- Should the principles of matched funding include opportunity costs?
- Does matched funding meet the goals of public procurement?
- Can matched funding be included in Lean Thinking?
- What are the practical implications of matched funding and opportunity within public procurement?

Upon considering the overall lack of matched funding and opportunity within the procurement extant literature, researchers may want to originate application of the methodology to specific areas such as public works and infrastructure.

The Council of Development Finance Agencies (“CDFA”) recently formed an active partnership with the Clean Energy Group in order to accelerate investment in and provide financing to clean energy initiatives. Underwritten by municipal bond financing, similar types of undertakings which may be policy-oriented in municipalities worldwide, are representative of the types of forward thinking opportunities for matched funding and opportunity available to public sector generally, and public procurement professionals specifically as instruments of policy.

Future research should focus on the qualitative methods of case study assessment and cross-jurisdictional comparative analyses. The cross jurisdictional analyses are particularly important in discovering new and innovative ways of financing public programs such as infrastructure, public works, utilities, and other policy-enabling procurement programs oriented towards universal application.

RESULTS

Thai (2007) indicates the seven goals for public procurement include the following: 1. Maximize competition 2. Maintain integrity and transparency 3. Cost 4. Quality 5. Timeliness 6. Risk management 7. Accomplish social and economic objectives.

Applying the methodology and juxtaposing matched fundings' opportunity costs onto the seven goals leads to the potential that matched funding and opportunity when applied by public sector can lead to better decision making regarding true net social benefits and costs. Especially considering focused applications such as infrastructure, public works, public private partnerships, privatizations, and other procurement initiatives involving long-term horizons, and substantial capital outlay, the application of a framework for matched funding and opportunity leads to better decision making, true all-in cost portrayal, and more robust transaction costs. The resultant outcomes are better informed public investment decisions. The primary premise of this research paper is to incorporate matched funding and opportunity into procurement decisions regardless of the political implications. It leads to more informed decision making of taxpayer dollars, particularly acute considering contextuality.

DISCUSSION

The idea that a public entity can readily obtain access to an 'unlimited' pool of available funds in the money and credit markets is an illusion. All public entities compete for the most attractive financing terms as well as access to credit markets. Recent disturbing trends pertaining to bankruptcy proceedings, such as various American public jurisdictions including but not limited to Jefferson County, Alabama; Harrisburg, Pennsylvania, Stockton, California and others, is leading to unappetizing choices. Amongst the choices, foregoing paying one creditor versus another creditor is but one of several factors compelling forward looking financial managers and procurement executives to reassess business as usual.

How to obtain easier access to credit markets; more effective alignment in asset-liability management, implementing the matching principle of future debt obligations to current operations; lowering opportunity costs of financing, and deriving an 'all-in' net social benefit/net social cost are all indicative of the phrase 'Wearers of Many Hats' applicable to public procurement professionals.

Long a practice in pension fund management and nonprofit organizations, the concept of matched funding is not necessarily a new way of looking at the true cost of funds but by incorporating the benefits and cost of opportunity can lead to public procurement as a champion of transparency. And transparency can be a differentiator and competitive advantage when it comes to securing funding for capital projects and ongoing operations. Matched funding and opportunity should be incorporated into the normal course of calculating a true all-in cost of funds for public entities, leading to a more robust net social benefit and truer opportunity cost. Opportunity cost in many public sector, as well as private sector organizations' decision making is excluded, or worse, completely forgone. The all-in cost of funds calculation requires a Net Present Value ("NPV") analysis be performed on public procurement program evaluations (Posavac, 2011). I argue that the true all in cost include potential matched funding as an opportunity cost component. Additionally, matched funding should be included as an externality when deriving a net social benefit.

Does the concept of matched funding comply with the principles of public procurement? Juxtaposing matched funding and its inherent opportunity cost components with the principles of public procurement are revealed through certain case studies presented herein. The concept of the net social benefit calculation included in the public investment decisions has been a 'recommended' part of the normal course for close to 50 years (Feldstein, 1964). Additionally, Feldstein posited the Net Social Benefit calculation for a particular project attempts to capture the value at the time of decision-making. Granted, the value may increase or decrease further out on the time horizon, contingent upon the project type. Schiele and McCue (2011) point out public procurement departments include

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operational targets and missions, such as those related to cost savings, improved service quality, process efficiency and effectiveness. As issues of public works and large mega infrastructure projects appear on the procurement menu, the need to address such undertakings is starting to reach criticality. Depreciated way beyond their expected lifecycle, infrastructure of all types and applications are in need of upgrading, replacement, and/or new build.

A framework for assessing, capturing, and reporting matched funding and opportunity was developed for this research paper.

Qualitative Case Studies in Matched Funding and Opportunity

Public administration and management must balance often competing goals and objectives. Not dissimilar to the private sector/business administration activities, in some cases the obtainment of objectives strips away greater value that may be attached to goals. In other words, objectives are short-term focused and goals are long-term focused. Matched funding and opportunity in public procurement provides an instrumental tool delivering public value in both immediate operational benefits as well as longer-term goal achievement. Through the framework of an 'all-in' true net social benefit/(cost) assessment, organizational change and transformation may take place serving as the output delivered through the procurement professional (Kamann, 2007).

The following is a discussion of several case studies encompassing a multitude of sectors, each incorporating elements of matched funding and opportunity in public procurements. Each case study highlights unique implications upon daily operations and management of public organizations. The case studies are broken down into the major sectors of which the matched funding and opportunity elements have been deployed. These areas include energy, energy-facilities management, information communications and technology ("ICT"), and compliance management.

All of the case studies occur in the United States of America. The case studies involve public procurement professionals at Salt Lake County,

Utah; Sonoma County Water Agency, California; Florida Department of Transportation, Interstate-595, Broward County, Florida; Florida Atlantic University Innovation Village, Boca Raton, Florida, and North County Transit District, San Diego County, California.

All case study information discussed herein is publicly available information. The case studies examined provide exploratory insights into whether the presence of matched funding and opportunity costs exists. Additionally, the case studies provide insights and some answers to the following questions of inquiry:

- **Should the principles of matched funding include opportunity costs?**

- **Does matched funding meet the goals of public procurement?**

- **Can matched funding be included in Lean Thinking for project purposes?**

- **What are the practical implications of matched funding and opportunity within public procurement?**

- **Can matched funding and opportunity be applied within public procurement?**

- **What performance measurements need be in place for program evaluation of matched funding and opportunity cost-benefit analysis in public procurement?**

All the case studies are then distilled through the process framework as to whether or not they are contributing to social benefit by enhancing public value, efficiently contributing to the taxpayer stakeholder group, and effectively serving the needs of customers.

Matched Funding and Opportunity in Energy and Facilities Management, Salt Lake County, Utah, USA

Responding to the needs of customers led the local government of Salt Lake County, Utah to not only more efficiently run public facilities but also to develop an internal source of clean energy, which ultimately, led to lowering the overall cost of financing while locking in

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a long-term fixed rate. Convention center management approached the finance and procurement areas seeking a response to a growing industry demand for green initiatives. Utah, according to public officials, was behind the times and was ineffectively competing against other convention centers for business. Convention center officials expressed their urgent desire to upgrade and convert the facilities to solar powered energy. Major challenges pertaining to procurement of customized solar equipment, obtainment of financing, and private sector participation forced public management to consider both short-term requirements as well as long-term strategic implications. Essentially, public management officials needed to rethink their method of providing service delivery.

Salt Lake County procurement officials sent out a Request For Proposal (“RFP”) in 2010. Identification and selection of private partners were the first initiatives undertaken by public management. The result of the tender process was the formation of a public-private partnership. Bella Energy and Carbonfree Technology formed the private partnership and Bella Energy was selected to act as the engineering, procurement and construction manager. The solar project materials were fitted onto the convention center and required customized fitting of materials throughout the facility. Aggregate all-in cost was budgeted at US\$6.7 million and sources of financing needed to be identified with terms and conditions favorable to the county. The Salt Palace Convention Center was configured with solar paneling on its rooftop representing the largest rooftop installation in Utah. The result was a solar project expected to generate 2.4MWh of solar energy per annum. The combination of energy consumption conservation and renewable technology from suppliers meant that a significant source of power had been developed for the convention center to offer future guests.

Several challenges arose regarding the financing for the project. The combination of all factors meant that each factor could not be resolved without ramifications on other factors, thus creating a highly interdependent project. Some of these factors included:

- legislative laws in place prevented a power purchase agreement (“PPA”) from being formulated and contracted.

Power purchase agreements are contracts generally long-term in duration, specifying agreed upon sources of power at agreed upon rates. Interconnection agreements to the power grid are also required with the local power utility. Both agreements are contracts possessing a measure of value. The agreements are subject to negotiation.

- financial enticement or incentive needed to be created for private sector participation in order for the public entity to get benefits.

Insufficient internal funding compelled the county to search for external financing sources in order to pay not only for the construction of the solar plant but also to

- achieve positive net present value of future cash flows needed to “offset” 21 cents per kilowatt cost for the solar power.
- a relatively high social discount rate or cost of capital was to be used for the capital project proposal.

Summarily, legislatively mandated political and financial constraints needed to be overcome for the project to be successful. On top of that the cost of the power was prohibitive. The arrived solution was a result of a coordinated effort across departmental boundaries making use of both a constructed long-term development plan targeting 10 MW of solar power on as many county-owned facilities as possible as well as achievement of short-term objectives of securing public and private capital. Additionally, the initial solar project was extended to include Environmental Health Center and the Riverton Senior Center. A combination of public and private capital, federal grants, and public/private subsidized bonds that are able to work together efficiently because of the recent Stimulus Bill were crafted by public management. Moreover, the project also made use of recent changes to Federal tax rules, and took advantage of the recent resurgence of private money and capital markets affording development of a public-private partnership.

The key factor which enabled Salt Lake County to proceed with the project was a decision to forego pursuit of owning the solar power project. The accrued financial benefit arising from the PPA with a private entity meant that the contract served as a hedge against

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future inflation in the prices of energy. The PPA was a long-term contract and locked in both the supply of power (generated from the solar installations) and the price of the power (fixed rates that remove uncertainty in the marketplace). This certainty in both supply and cost provided a greater benefit than the build own operate model. The reason why is because the overall transaction costs were both minimized and predetermined. Commodity prices fluctuate and so do interest rates over time. Matched funding in public procurement through the RFP, pursuit of the PPA, and public-private partnership model instead of asset ownership also demonstrates that incorporating opportunity costs can lead to resolution of previously construed 'wicked' problems. The resultant impact of such matched funding and opportunity thinking equated to an energy power source being locked in for the next 30-years, albeit a little higher rate for the first year but a guaranteed rate for the next 30 years. Comparatively speaking, the PPA payments that the county agreed to started at 7.5 cents per kilowatt hour versus the 21 cents per kilowatt hour.

In 2010, with the passage of Utah HB145 - Renewable Energy Financing Provisions, the State of Utah enabled third-party financing of renewable energy systems for various public sector organizations including counties, municipalities, cities, towns, other political subdivisions, local districts, special service districts, state institutions of higher education, school districts, charter schools, or any entity within the state system of public education, and certain nonprofits. Certain implementation tools such as total quality management ("TQM") can be applied to all of these public and semi-public organizational structures at the local governmental level (Furtherer & Elshennawy, 2005). Additionally, the expanded legislation provides the political rulemaking justifying the use of matched funding and opportunity thinking in deriving true all-in net social benefits. This recent legislation also clarified that certain third party arrangements for financing of projects such as the Salt Lake County solar project are exempt from regulation by the state public service commission. This exemption is consistent with similar regulations in several other American states.

As certain energy related legislation and financing were set to expire, while still applicable, the county formed a taxable limited liability company to build the project allowing the entity to receive a federal 1603 grant in lieu of an investment tax credit. Matched funding and opportunity thinking in public procurement led to the practical implications of securing sources of financing dedicated to roof repair expenditures, creation of an internally generated green renewable long-term power source, risk management control, interest rate and cost-benefit management, while simultaneously lowering transaction costs, increasing public value, and pleasing the customer.

Matched Funding and Opportunity in Energy, Sonoma County Water Agency, Sonoma County, California, USA

Farms-to-fuel, describes the initiative undertaken by the Sonoma County Water Agency (the “Agency”) to offset energy use with renewable sources and in the process becoming ‘carbon free’ by 2015. The public organization commenced construction of an anaerobic digestive facility to produce biogas. The Agency wished to co-locate the biogas facility alongside an existing combined heat and power facility, and interconnect both plants. A 1.4 megawatt fuel cell would convert some of the biogas to clean electricity while the remaining biogas would be sold for use elsewhere. Building the entire facility in one spot was deemed the most efficient method of construction. Public procurement officials requisitioned a local engineering contractor to conduct a feasibility study. Project scoping exercise revealed that State of California Self-Generation Incentive Program (“SGIP”) funding was available. The availability of SGIP funding was critical in project development because the Agency was cutting back on water bond capacity for financing. As a result of the cutbacks on conventional financing, a decision was made to seek out a partnership with a private entity and sign a PPA. Consequently, it was discovered that financial capacity under SGIP was used up.

Public management decided to offload the entire project cost onto the private partner, Biostar LLC and in turn, sign the PPA for a committed cent per kilowatt hour charge. Permitting for the process completed during the summer/fall of 2011. The SGIP protocol required the Agency to work through power utilities in order to make

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changes and finalize interconnection agreements to the power grid. The power utilities were lukewarm and reluctant to work on interconnection but ultimately the agreement was consummated. The resultant PPA and lease agreements with the private sector power company resulted in a power source at 10 cents per kilowatt hour charge rate. Additionally, because of the involvement of the private sector, BioStar Systems, LLC in a public-private partnership ("P3"), the project qualified for federal renewable energy credits, in other words, a form of matched funding and opportunity, which offset 30% of the total project costs. Moreover, the project and the Agency remained eligible for the U.S. Treasury 1603 grant because the private developer was still involved and performing ongoing operations.

The lessons learned from Sonoma County have less to do with the financing and more to do with greenhouse gas emissions reductions in order for the Agency to meet its carbon free goal by 2015 and civic engagement (Bardach & Lesser, 1996). However, the often elusive concept of matched funding and opportunity compelled the public sector to find practicable solutions to an issue heretofore unrecognizable. Furthermore, in the case of public financing, a number of externalities needed to be addressed along the lines of environmental impacts. The externalities included: number of trucks coming to the power facility transporting biomass; odors and emissions; because the power facility was domiciled near an airport – any hazards for flight operations, and finally, wetlands and drainage. Limited public opposition was experienced by the Agency, mainly concern leveled by local neighbors pertaining to odors and truck traffic. Public management dealt with the concerns of the community by inviting people to Sonoma County offices and a 'show and smell'. Additionally, a traffic study was conducted resulting in negligible impact.

The biomethane produced by digestion of the Sonoma County wastes was the equivalent of 36,460 tons per year of CO₂, one of six greenhouse gases identified by the Kyoto Treaty. Matched funding and opportunity as a process in public procurement resulted in construction of an alternative clean energy facility; compliance with

federal and state ambient air quality standards; and greenhouse gas emissions reductions, as a result of the biomass project, totaling 41,360 tons per annum of CO₂. Set against the backdrop of looming cap and trade initiatives within the State of California, Sonoma County was well positioned to subsequently partner with a nonprofit carbon offset group in order to possess the option to sell its carbon credits representing 41,360 tons per annum of CO₂ or leverage them financially through a private placement. The carbon credits emanating from the biomethane plant and other ancillary implications do possess a financial value and represent tangible value in the form of matched funding albeit through trade or sale. Either financing method lowers the overall cost to do business and minimizes transaction costs incurred through the green public-private partnership undertaking (Bauer, 2011).

The primary precondition exemplified through the Sonoma County Water Agency case study that needs to be in place for adoption and implementation of matched funding and opportunity in public procurement is the willingness to constantly innovate. The lesson learned is that what appeared to be a costly undertaking at inception, ultimately led to an increase in public value through civic engagement and environmental stewardship.

Matched Funding and Opportunity in Large Infrastructure – Florida Department of Transportation, Interstate-595 Highway, Broward County, Florida, USA

Public Infrastructure includes dams, levies, bridges, roads, tunnels, power plant generation, transmission and distribution (“T&D”) power grids, ports, sewerage, various other public works and utility-type services. Large infrastructure transactions, approximating \$1 billion or more, are classified as mega projects. Several projects exist throughout the United States as well as globally. All of the mega projects require new procurement arrangements and contracts that strongly appeal to the principles of matched funding and opportunity. Pisano (2011) attributes success of the Alameda Corridor to a willingness on public management’s part to continuously seek innovative ways to build, manage, and pay for such megaprojects.

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Within the State of Florida, commencing five years ago in August, 2007, Interstate-595 Highway, (running east-west in Broward County) represented a new type of public-private partnership, known as a Design, Build, Finance, Operate, and Maintain (“DBOFM”) model. The project completion cost was US\$1.5 billion. Procurement professionals within the State Transportation Authority created new and extended procurement strategies, ultimately seeking innovative revenue arrangements that would utilize a combination of matched funding financing, both governmental and private sector as well as shared revenue. The project was the state's second major public-private partnership (“P3”) using a concession approach and was likely to include some bond financing. Once again, future budget constraints as well as human resource capacity constraints dictated to a great extent, the day-to-day objectives as well as the long-term goals of the FDOT. In this circumstance, matched funding and opportunity with strategic intent needed to be at the forefront of the public procurement department.

The Florida State Department of Transportation (“FDOT”) shortlisted four consortiums out of six original respondents to an RFP issued. The RFP put together by the public procurement management at FDOT submitted qualifications in response to the state's proposed concession contract to design, build, finance, operate, and maintain the I-595 corridor improvements. After scoring the original six on their financial and technical qualifications, DOT evaluators selected ACS Dragados-Macquarie Partnership, Direct Connect Partners, Express Access Team, and I- 595 Development Partners to respond to the RFP. Selection of the concessionaire with the "best value proposal" was made. FDOT then negotiated a 35- to 50-year contract with the firm that would build the entire project under a concession agreement.

The 10.5-mile-long project included multiple improvements within three major corridors in close proximity - Interstate-595, Interstate-95, and the Sawgrass Expressway - in order to relieve the present severe traffic congestion and provide for future capacity. The public-private partnership (“P3”) concession was designed to accelerate planned improvements by a decade. Furthermore, the concession

faced political headwinds that were not necessarily in favor of P3s. The reason for some of the distaste by the public for P3s was nationwide. In this particular case, within the State of Florida some perceived P3s stealing away public service sector jobs. Another concern expressed during the shortlisted phase conducted by the FDOT evaluators and public procurement personnel was that an initial expenditure and time, value for money, and effort would be wasted as majority of public-private partnerships fail (Wettenhall, 2003).

The improvements would include construction of reversible express lanes in the median at ground level, new auxiliary lanes, reconstruction of entrance and exit ramps to remove merging conflicts, frontage roads, construction of sound barrier walls at identified neighborhoods, and provision for future transit systems within the I- 595 corridor. Variable tolls would be used on the reversible express lanes. FDOT would retain the toll revenues and control the toll rates, which are prescribed in state law. One consortium was awarded the tender and construction commenced with a scheduled completion date set for 2014. Equity members in ACS Dragados-Macquarie Partnership are ACS Infrastructure Development Inc. in Coral Gables, Fla., and MIHI LLC, a division of the Macquarie Group, in New York were the consortium awarded the tender.

* Other consortia was composed of Direct Connect Partners' equity members being Skanska Infrastructure Development AB in Miami, Fla., John Laing PLC in London, and Fluor Enterprises Inc. in Greenville, S.C.

* Express Access Team's equity partners are Babcock & Brown Infrastructure Group US LLC in San Francisco and Bilfinger Berger BOT Inc. in Markham, Ontario, Canada.

* Equity members for I-595 Development Partners are OHL Concesiones SL in Austin, GS Global Infrastructure Partners I LP, a division of Goldman Sachs, in New York, and Balfour Beatty Capital Inc. in Atlanta.”

The FDOT initially separated the I-595 project into smaller contract packages to be delivered over a 15-20 year period. By bundling these packages into a single design and build contract covering the entire project scope, \$1.5 billion and 35-50 years, the FDOT determined it

could deliver on the improvements to the highway approximately 15 years earlier than if it proceeded with the project under the more traditional pay-as-you-go procurement. The matched funding and opportunity costs are significant in mega infrastructure projects. Because of the required financing capacity and term length of the transaction, the use of a blended discount rate, consisting of a social discount rate and a corporate discount rate for the private sector partners was utilized in the value for money analysis. In order to accomplish the project objective, as well as generate a reasonable rate of return incentivizing the private sector partner to continue maximizing value, matched funding and accrued opportunity cost savings led to a new set of challenges pertaining to the financing. The investment of private equity was necessary, therefore, the matched funding and opportunity framework was oriented to the private sector participants.

With more infrastructure megaprojects forthcoming on the American agenda as well as the global agenda, capacity constraints in both human resources and budgetary, dedicated public procurement professionals will need to be highly trained and educated in order to deal with the complexities (Prier, McCue & Behara, 2010) associated with long-term time horizons (30-50-100 years) and financial sophistication (\$1 billion or more size of transactions). A commitment to matched funding and opportunity in public procurement is a necessity.

A common theme running through the case study (as well as the other case studies discussed herein) is that when constraints are imposed upon the operating environment than the human resource element responds pertaining to resolution. Innovative means of discovery have led to solutions regardless of the size or degree of complexity. In this case study, public procurement professionals were compelled to seek out an optimal balance between short-term objectives and long-term goals, especially acute when considering the size of the transaction - \$1.5 billion, the length and time horizon of the transaction - 35-50 years, and the establishment of precedent and commitment to the community with which the public procurement professionals were serving. Furthermore, a politically

sensitive balancing act had to be achieved regarding commitment and accountability to public personnel and private sector participants (Bardach & Lesser, 1996; Krings & Wall, 2006) and the dynamics of that interaction over the course of the project would remain subject to policy shifts.

Some excerpts from Bond Buyer, New York, N.Y.: Dec 10, 2007. Vol. 362, Iss. 32774; pg. 3.

Matched Funding and Opportunity Costs in Social Infrastructure – Florida Atlantic University’s Innovation Village, Boca Raton, Florida, USA

Social infrastructure distinguishes itself by representing infrastructure needs serving a social purpose. Hospitals, education, public housing, are representative of social infrastructure development. Kumar (2010) demonstrated that efficient lean thinking as a process combined with certain tools has resulted in positive benefits in special purpose governmental entities such as public housing authorities. Ghun (2005) lists other important factors to consider such as the positive public relations and favorable press coverage resulting from matched funding and opportunity processes. Although such coverage and ‘branding’ are difficult to quantify in terms of increased customer satisfaction with a public entity (Maleyeff, 2007). Yet attempting to quantify the value of branding through marketing campaigns for public sector adoption of matched funding is an example of opportunity financing enhancing public value (Dewell, 2007; Thor, 2008).

Florida Atlantic University’s Innovation Village – residential living, under the auspices of Florida’s Department of Education, highlights the complexity, size, scale, and long-term implications such new perceptions of the public procurement contracting field possess and their potential impact upon public goods (Tiebout, 1956) and the role of private equity. Not unlike other state higher education systems, budget constraints have become the normal course for daily operations. Heretofore standard boilerplate status quo solicitations such as requests for proposals, invitation to bid, and others, although still utilized, no longer serve the cutting edge requirements demanded in order for infrastructure to be upgraded and the gap

between available financing and capital requirements fulfilled. Public contract management through incorporation of matched funding can positively impact public asset management while providing an opportunity for a sustainable, enticing rate of return in which private equity finds appealing. The importance of private equity participation and the new public contract management tools combine to open a 'window of opportunity' for sustainable, long-term relationship management critically needed for infrastructure development. Thus, the concept of matched funding is not just for exclusive use by public organizations but that procurement management can apply the principles for collaborative organizational structures, private companies, and funds as well as nonprofits.

Combining necessary infrastructure demands with pension obligations and general obligations, while facing diminishing revenues generated from property taxes, many state and local governments are turning more towards longer-term debt financing in the form of public-private partnerships and concession agreements for immediate infrastructure needs. The trend towards lengthening debt obligations further out on the time horizon has been a recent phenomenon born out of the privatization of the public sector era circa 1980s (Hildreth, 2005). Furthermore, the last decade saw two recessions; therefore, debt management practices require more predictable future cash flow streams or financial downgrading by the rating agencies may occur (Denison, 2006). The never ending public sector pursuit of efficiency has led much public management at the state level to centralize purchasing (McCue & Pitzer, 2000). Such centralization and consolidation moves may be cost effective but have led to a crisis in human resource capacity. Doing more with less is pragmatically driving officials to innovate in the area of funding as well. A review of the literature indicates that the trend towards centralization and cost cutting in the midst of real capacity constraints has been a global phenomenon (Hodge, 1996; Domberger & Hall, 1995; Davis, 2005). The trend towards cost efficiencies and doing more with less will continue. The public sector must deal with such daunting challenges now and in the State of Florida, such challenges have led to activism on the part of procurement officials.

In this case, the university, a state institution, was able to secure financing that otherwise may not have been available on a direct basis due to budget cuts and lower overall state revenues. Therefore, the university with assistance from the state was able to secure a public-private partnership arrangement and co-manage the operation. Balfour Beatty Capital invested equity for the design, development, and construction of the building or facility. The private companies and the higher education institution then shared in the resulting revenue. The college or university benefitted from a new income stream, improved infrastructure, and access to much needed capital, while the private partners brought experience and expertise to the development, management, and operation of the new facilities, and generated revenue from the partnership.

The development and management functions of the Public-Private Partnership project are performed through joint ventures between affiliates of BBCS and Capstone. The student housing community was constructed by Balfour Beatty Construction, LLC and designed by PGAL (Pierce Goodwin Alexander & Linville). To help fund project costs, Balfour Beatty Capital, Inc. (BB Capital), also a subsidiary of Balfour Beatty Capital Group, Inc., purchased \$3.4 million of tax-exempt bonds issued by FAU Finance Corporation, a direct service organization formed on behalf of FAU. The funding in the form of tax-exempt bonds were part of the wildly successful Build America Bonds financing made available through the federal government providing matched funding and opportunity in the form of tax exemptions. The resultant Innovation Village Apartments provide 1,216 beds for upper-division undergraduate and graduate students on FAU's main campus in Boca Raton, Florida. The \$123.0 million project revitalized student living on the FAU campus (Business Wire, 2010).

Some Excerpts from Business Wire. New York: May 14, 2010.

**Matched Funding and Opportunity Costs in Compliance Management
– North County Transit District, San Diego County, California, USA**

The North County Transit District (“Transit District”) is a public sector participant operating bus, commuter rail, light rail, and paratransit systems within the northern section of San Diego County in the State of California. The Transit District needed to automate environmental

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reporting. All of the reporting was currently being performed on a manual basis consisting of a multitude of spreadsheets performed by several employees. Approximately 107 million passenger miles are traveled on an annualized basis combined with nine million vehicle miles resulting in 12.5 million trips constituting 550,000 annual revenue vehicle hours. The Transit District as a governmental agency was facing an operating day to day environment with extremely challenging financial conditions front and center stage. Mandates for reporting and sustainability compliance from state and federal governmental authorities combined with the public choice for building sustainable environmental transportation systems. Both sustainability and public transit had a natural synergy integrating social, political, economic and environmental issues deemed relevant to the Transit District's strategic intent. The Transit District's sustainability plan focused first on cost reductions, then capitalizing on opportunity resulting in construction of the cleanest, most scalable public transportation for the community. Upon considering the financial constraints, the Transit District not only needed to develop a public finance return on investment model for economic and sustainability but also needed to discover a way to both access capital while simultaneously lowering its overall cost of financing. The compliance and reporting requirements called for assessing the baseline for environmental sustainability and evaluating such measurements against standards. Finally, the entire process from start date to project completion date needed to be completed in 120 days.

On face value, the often competing objectives required an innovative way of thinking especially in light of the financial constraints as well as operating the commuter transit lines with minimal to zero disruption to the customer service experience. The methodology deployed included defined but limited commitments of human resources, .25 FTE, (a quarter of one full time employee) dedicated to sustainability, development of a business case for sustainability, lessons from the American Public Transportation Association ("APTA") Sustainability Leaders (best practices) and ensuring adherence on the part of the Transit District to the APTA's sustainability commitment.

Management of the Transit District needed to rapidly move away from manually prone processes to a consolidated automated reporting process. Several challenges presented themselves including:

- Identification of sources of environmental impact
- Lack of standards
- Lack of actionable business data regarding day-to-day operations and impact on sustainability including consumption of power, water usage and waste management
- Identification of an independent third party such as Climate Registry for assessing baseline performance of greenhouse gas emissions reductions
- Data collection and process automation
- Develop new tools for end users
- Leverage information technology (“IT”) existing setups
- Identify, procure, and rapidly deploy a proven enterprise class software platform
- Comply with both third party Climate Registry and APTA reporting requirements and guidelines

Furthermore, in order to drive continuous improvement in the organization a number of issues concerning automated environmental reporting had to be adopted and implemented:

- * abandonment of the manual effort through software automation
- * construct the business case for sustainability in conjunction with the procured vendor
- * any land usage improvements needed to be tracked by the software tool
- * interface the tool with a Lifecycle Assessment Tool
- * ensure integration of all tools for accurate instantaneous timing for environmental accounting and reporting

Operational challenges consisting of lengthy reporting processes with weak internal controls, complex systems which could not identify new opportunities, and disconnection between strategy and execution were resolved through the utilization of the automated reporting process. Tools and techniques of value-stream mapping, root cause analysis, rapid improvement events, and standardized systems were evident allowing for the possibility of creating public value. What

appeared to be process achievement through a higher cost consideration ended up being the tipping point for value creation. Assessing the baseline was the starting point which, ultimately, ended up revealing additional opportunities for cost effectiveness. Transit District personnel realized that the manual effort to compile data was expensive and risky. Therefore, management looked to existing tools for opportunities to leverage investment.

The operational challenges, including financial- and human-resource constraints, were met within the 120-day project timeline. Through incorporation of both funding and opportunity in public procurement as a process with strategic intent as well as adherence to the Schiele & McCue (2011) lean thinking framework assessing lean thinking operational adoption, the objectives and goals were met. Financial constraints forced the Transit District to seek out heretofore unconventional or alternative financing methods designed to lower overall cost of financing while simultaneously implement a costly business process upgrade (Arkin, 2008).

CONCLUSION

The research is both timely and relevant for practitioners in public procurement who may be contemplating adoption, implementation, and evaluation of matched funding and opportunity costs of financing in public, non-profit, Nongovernment Organizations (“NGOs”), public-private partnerships, and special-purpose public procurement operations. The aforementioned case studies, by no means exhaustive, contribute to improving the understanding of the adoption and implementation of the framework for matched funding and opportunity thinking for both direct and indirect public procurement activities. The common denominator amongst the case studies presented herein is that the application of matched funding and opportunity in public procurement is suitable to all types and sizes of transactions regardless of complexity levels, difficulty in comprehension, and degree of ‘political’ presence. The transaction size ranged from \$6 million to \$1.5 billion. The timing of the procurement projects ranged from 120 days to 35 years or greater.

The effect of matched funding and opportunity in public procurement upon public value, cost-benefit analyses, civic engagement, stakeholders and taxpayers resonates across the board. Incorporation of the matched funding and opportunity in public procurement across all organizations, located worldwide, has just begun. In pursuit of the obtainment of a true 'all-in' cost of funding, transparency just may be a competitive advantage enabling procurement professional to be leaders in doing more with less. Pursuing avenues of innovation and doing more with less does not necessarily need to present an oxymoron. Instead, this research presentation has attempted to provide factors, ask questions of inquiry, propose a universal methodological framework, and suggest incorporating the thought process of analyzing matched funding possibilities and opportunity into public procurement planning. Moreover, several practical applications were presented through the qualitative method of comparative case study. Incorporating some elements of program evaluation could also serve as a disciplined means of administering effective and efficient activities enabling procurement as a profession to not only lever their criticality but positively position such practitioners and finance managers front and center stage in the omnipresent battle of doing more with less.

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