

Envision™ as a Solution to Standards and Capacity Challenges

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ABSTRACT

The need for investment in infrastructure and public buildings continues to grow with no end in sight. Deferred maintenance and expanding service demands are compounding the funding challenge. The days of federal earmarks have ended and formula grants are being replaced by highly competitive merit based programs. In the mean time, private sector Impact Investors are eager to deploy pension fund, family office, socially responsible, and ESG sourced capital into infrastructure and public building projects. There is enormous potential to more than offset public funding shortfalls with impact capital but, barriers to entry exist. Project sponsors will need to convince merit based funding programs and private sector investors of the **value** associated with their initiatives. In the new normal, where public or private capital is concerned, infrastructure delivery professionals will need to learn to compete. Competition will be driven metrics, assessment standards, and access to capacity. It is going to be complicated for a while as the lack of formal standards, adequately trained and equipped evaluation capacity presents a major challenge to the removal of funding barriers.

This paper describes how Envision™ (Envision) can serve as a solution to the standards, training, and capacity challenges to project funding while creating a competitive advantage for Envision Professionals, their project sponsors, and stakeholders as they search and compete for funding to implement their sustainable infrastructure programs.

INTRODUCTION

GET IN THE GAME. The infrastructure delivery industry is facing a major game changer in the way projects will be funded. While projects are being delayed and even cancelled, many planning and design practitioners wait on the side lines. What they do not realize is that solutions to funding dilemmas largely rely on their knowledge, skill, and initiative.

According to the US SIF Foundation, Report on Sustainable and Responsible Investing Trends in the United States (2012), decreasing levels of public funding are creating shortfalls that could well be offset by private sector impact capital from sources including pension funds, family offices, foundations, socially responsible and environmental, social and governance (ESG) investors who control nearly \$30 trillion worldwide. The lack of metrics and standards for project rating and valuation combined with a shortage of capacity to evaluate projects are major barriers to accessing merit funds and to the unleashing of impact capital. The formalization of the emerging standards and mastery of project evaluation skills are key to unlocking access to capital that will advance the sustainable infrastructure cause.

The infrastructure delivery industry faces a new reality. More than ever, project sponsors will have to compete for the resources needed to implement their programs. The US DOT's Transportation Investment Generating Economic Recovery (TIGER) Grant Program initiated under the ARRA of 2008 offers a powerful hint of things to come.

TIGER is billed by US DOT Secretary Foxx as a "highly competitive program ...offering one of the only federal funding possibilities for large, game-changing multi-modal projects." Each round of funding (five completed since 2008) have drawn huge numbers of applications and demand, according to Transportation for America, Tracking TIGER Grants, as of 2013 that exceeded \$136 Billion for a total funding pool of \$3.57 Billion. The ENO Center for Transportation in its report entitled, Lessons Learned from the TIGER Discretionary Grant Program (2013), reported that there were 5,200 applicants through 2013 with 186 selected through 2012 confirming the level of intensity in competition for funding. One element of the selection process focuses on the use of benefit-cost analysis (BCA) to evaluate long-term economic outcomes in the program application and evaluation process. "Other discretionary USDOT programs, such as the Transportation Infrastructure Finance and Innovation (TIFIA) loan program and the Transit New Starts grant program, had also required economic analysis in their application and evaluation processes. But TIGER was the first discretionary federal transportation program that required project applicants to estimate total expected project benefits and weigh them against project costs." The ENO report went on to state that the use of BCA presented problems for project applicants as many had, "little or no experience with this type of analysis and USDOT had little experience using it within discretionary grant programs."

TIGER showed that metrics, standards and skilled capacity matters. Infrastructure delivery professionals that “get it “and, get in the game early will have a significant advantage. But how?

STANDARDIZATION

That’s where Envision™ (Envision) comes in. Envision has what it takes to achieve standardization in the North American infrastructure delivery industry. It has achieved:

Credibility by providing a transparent process resulting from broad industry participation and consensus driven decisions as to how to appropriate assessment categories, weighting and scoring. It is designed to apply across a wide variety of infrastructure projects. It was expanded to incorporate attributes associated with the Zofnass Rating System developed with industry input by leading researchers and academics at Harvard’s Graduate School of Design;

Scale thanks to the three associations that back the Institute for Sustainable Infrastructure (ACEC, APWA and ASCE) which represent nearly 600,000 capital program influencers across North America as well as a rapidly growing list of ISI charter members (dozens of public and private entities) as well as ISI trained and accredited professionals (more than 2,000 Envision Sustainability professionals – ENV SP -- in the first two years);

Affordability thanks to modest fees for membership, training and project evaluation; and the ability to,

Deploy in mass thanks to the power of the Internet, ISI’s member network and influence of its practitioners.

Envision with Economics and Risk Assessment

Envision features an economic and risk assessment companion tool referred to as the Business Case Evaluator or BCE. The BCE was developed by Impact Infrastructure, LLC (ii) in consultation with the ISI Economics Committee (Committee). ii started with state of the art cost benefit and risk analysis and expanded its approach based on applied experience with the Sustainable Return on Investment (SROI) Framework which was introduced into the public domain in 2009. SROI has accrued a track record of over \$10 Billion in project assessments. The framework is used by a growing number of consulting firms. Elements of SROI can be found in USDOT TIGER BCA Resource Guide 2014.

The BCE expanded beyond SROI to include multiple account cost benefit analysis (MACBA). MACBA identifies and quantifies the degree to which there

are winners and losers among those impacted by a given project. The expansion also included features that quantify value based on distance and interrelationships and willingness to pay for sustainable infrastructure. The BCE is presented in spreadsheet form supported by the BCE User Manual and full documentation making it usable by planning and design practitioners as well as due diligence teams in the financial sector. Like SROI, **the BCE has been committed to the public domain.** Users can access it free of charge through the ISI website (www.sustainableinfrastructure.org/resources). ISI has committed to upgrading and maintaining currency of the BCE through 2016.

The combination of Envision with the BCE economic and risk assessment companion tool are products of a process that began with an industry-wide motivation for the creation of a single sustainability rating system for infrastructure projects. The three associations that created ISI and collaboration with the Zofnass Program for Sustainable Design Harvard's Graduate School of Design resulted in a common vision - "Envision." ISI enlisted a diverse collection of dozens of additional charter members and other supporting organizations to create political support needed to sustain the organization and its vision. An internal governance structure was created to manage the transition of Envision from concept to accepted practice. Envision was expanded to include economics and risk assessment to provide rating capacity at a scale and with a track record that no other system is replicating.

Objectivity, Transparency, and Comparability

Efforts to create a standard approach to infrastructure rating are reinforced by changes in political and business climates, increasing competition for financial resources, growing reliance on market based forces, and advances in technology. According to the U.S. Securities and Exchange Commission (Concept Release: International Accounting Standards 17CFR Parts 230 and 240, FILE NO. S7-04-00 – Supplemental Information) the world's financial centers have grown increasingly interconnected presenting the growing potential for global investors to find their way to participation in domestic infrastructure projects. According to the SEC, "Markets allocate capital best and maintain confidence of the providers of capital when the participants can make judgements about the merits of investments and comparable investments and have confidence in the reliability of the information provide."

Envision with the BCE provide an objective, transparent means of highlighting for comparison, project merits and value including *Financial ROI + External Economic + Social and Environmental Costs and Benefits x Adjusted for Uncertainty and Risk = Value for Money*. Because the BCE is based on globally

accepted cost benefit practices that have been embraced by federal agencies and are the default standard for evaluating infrastructure and building projects, the tool is responsive to the need for a comprehensive, generally accepted basis of accounting. Further, the objective and transparent nature of the BCE addresses the need for high quality assessment that can be subjected to rigorous interpretation and application. The combination of Envision and the BCE offer a comprehensive rating and economic assessment tool that meets implied criteria set forth by the SEC for standardization as described below:

ISI's diverse membership and consensus based development of Envision addresses the need for a **high quality rating standard**.

Provisions for the independent verification of Envision Ratings address the need for **audit capacity** so that the market has assurances that the rating process/standard is rigorously interpreted and applied profession-wide for quality assurance and that issues and problematic practices are identified and resolved in a timely manner.

Reliance on independent third party auditor generally associated with professional consulting firms or public agencies and that are regulated by professional performance standards address the need for **effective quality controls**.

ISI's ongoing commitment to continuing education and training, effective monitoring, industry reach and depth as well as the ability to deny or repeal Envision credentials in the event that of disciplinary action, address the need for profession-wide **quality assurance**.

The planning, design and financial professionals each have their own professional registration and licensing requirements address the need for active **regulatory oversight**.

Project Bundling

Project size and disparity present additional barriers to impact capital participation in infrastructure and building projects. It is common for those types of projects to have capital costs that are lower than can be efficiently financed in the private sector. Major institutional investors including public pension giants CalPERS and CalSTRS seek investment opportunities that exceed \$250M or more leaving smaller projects out of their consideration. Institutional investors overcome the monetary threshold challenge by bundling investments. Infrastructure and building projects are difficult to bundle because each project is unique and very difficult to compare. Envision with the BCE address the

comparability challenge by providing a means of “deconstructing” and “reconstructing” different projects into granular metrics classified as costs or benefits and further divided into cash and non-cash categories. Risk adjusted economic values based on meta-analysis and high quality peer reviewed data are assigned to those elements of cost and benefit that can be credibility assessed in economic terms. To compensate for uncertainty with some elements of value, Monte Carlo simulations are run to test large number of outcome scenarios. Discounted net present value outputs are reported on a multiple account basis to identify stakeholder outcomes. The same results are mapped to Envision categories to show which planning and design decisions contribute to value associated with the projects. When bundling projects, institutional investors will examine BCE based project business cases (stated in the risk adjusted monetary units) and Envision sustainability ratings. As a result, they will find themselves considering the credibility of projects and the value of their associated outcomes as opposed to the type, location, or size of facility as they assemble bundles of disparate projects to reach financing goals.

CAPACITY: Which Projects ARE Green and What Will They Deliver?

Who is saying which projects are “Green” and what they will deliver? The Green Bond market has revealed a rapidly growing demand for professionals and organizations with the capacity to formally opine on specific investments, made largely by private or corporate entities. Accounting firms and financially oriented consultancies are doing their best to fill the demand.

In the public sector, competition for resources within merit based funding and other programs is leading to capacity needs within the governing/administering agencies. Often, they are relying on infrastructure delivery professionals to screen projects for funding, however, in cases involving some form of public private partnerships, the accountants, consultancies, and lawyers are beginning to play leading roles.

Infrastructure and Building Specialists

As attention is turning to the role of infrastructure and building projects in green portfolios, accounting firms and consultancies are moving to provide capacity yet, infrastructure projects are complex and require depth of knowledge and experience in planning, design, construction, and operations. In addition, most projects are subject to extensive scientific, environmental, economic assessment as well as stakeholder outreach. There are very few accounting firms or consultancies equipped to opine with credibility on infrastructure and building projects. On the other hand, the infrastructure delivery industry including

professionally licensed/registered/certified planners, engineers, architects, program managers and constructors understand every facet of project performance. They are the first professionals to be associated with infrastructure and building projects and are generally the last to separate. They advise project sponsors and regulators, they are responsible for environmental assessment and permitting, and they provide independent third party reviews, performance monitoring, reporting, bond feasibility opinions, LEED and Envision ratings. In each role they are guided by standards. When it comes to opining on “green” projects they, like the accountants and consultancies are navigating through large numbers of competing tools that vary in scope and are often proprietary which make them expensive. The combination of Envision with the BCE provide the objective, transparent, comparable and consistent tools these professionals need in order to take their places in project screening, certification, investment prioritization, performance measurement, monitoring and reporting.

Where is the AEC Professional Community?

There is sufficient organized capacity among infrastructure delivery professionals to advise the impact investment community now. Yet, there is little movement towards this role. It is difficult to determine whether there is a lack of awareness within finance circles or a lack of interest from the project delivery industry in filling the capacity gap. Once again, using TIGER as the example, planning and design professionals learned that their input could make the difference between a win or, a loss. Those that won tended to use tools that now inform Envision and the BCE. Round after round of TIGER has shown a growing awareness of what it takes to prepare comprehensive, articulate and competitive applications. Those applications will have a great deal in common with the due diligence process which can begin at concept level and continue through years of post commissioning performance monitoring and reporting. As the infrastructure delivery community learns (sometimes the hard way) that Envision can guide them through sustainable design and the BCE can enable them to reveal project value. Used in combination, the infrastructure delivery professional can better address and inform stakeholder interests. The reward for filling the capacity gap includes enhanced competitiveness, greater financial, economic, social and environmental returns; more resilient communities; time savings and access to new opportunities.

CONCLUSION

THERE IS A NEW GAME IN TOWN. It involves intense competition for resources. Winning requires skill, experience, the right tools and rules to govern the game. Adding third and fourth dimensions to Envision: economics and risk assessment will enable players to enter the world of project funding and finance. It will place infrastructure delivery professionals at the center of project packaging and prioritization. Most importantly, it will provide the credibility, scale, and needed affordability to set the stage for mass deployment – all ingredients required to address the standardization and capacity challenge.