Il protocollo Envision: primo sistema di rating delle infrastrutture (portuali) sostenibili

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CONFERENZA NAZIONALE SMART PORTS - I PARTE

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www.remtechexpo.com

INSTITUTE FOR SUSTAINABLE INFRASTRUCTURE
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FOR SUSTAINABLE INFRASTRUCTURE
Graduate School of Design
Harvard University

ENVISION™

Un nuovo sistema di certificazione per la sostenibilità delle infrastrutture

ICMQ

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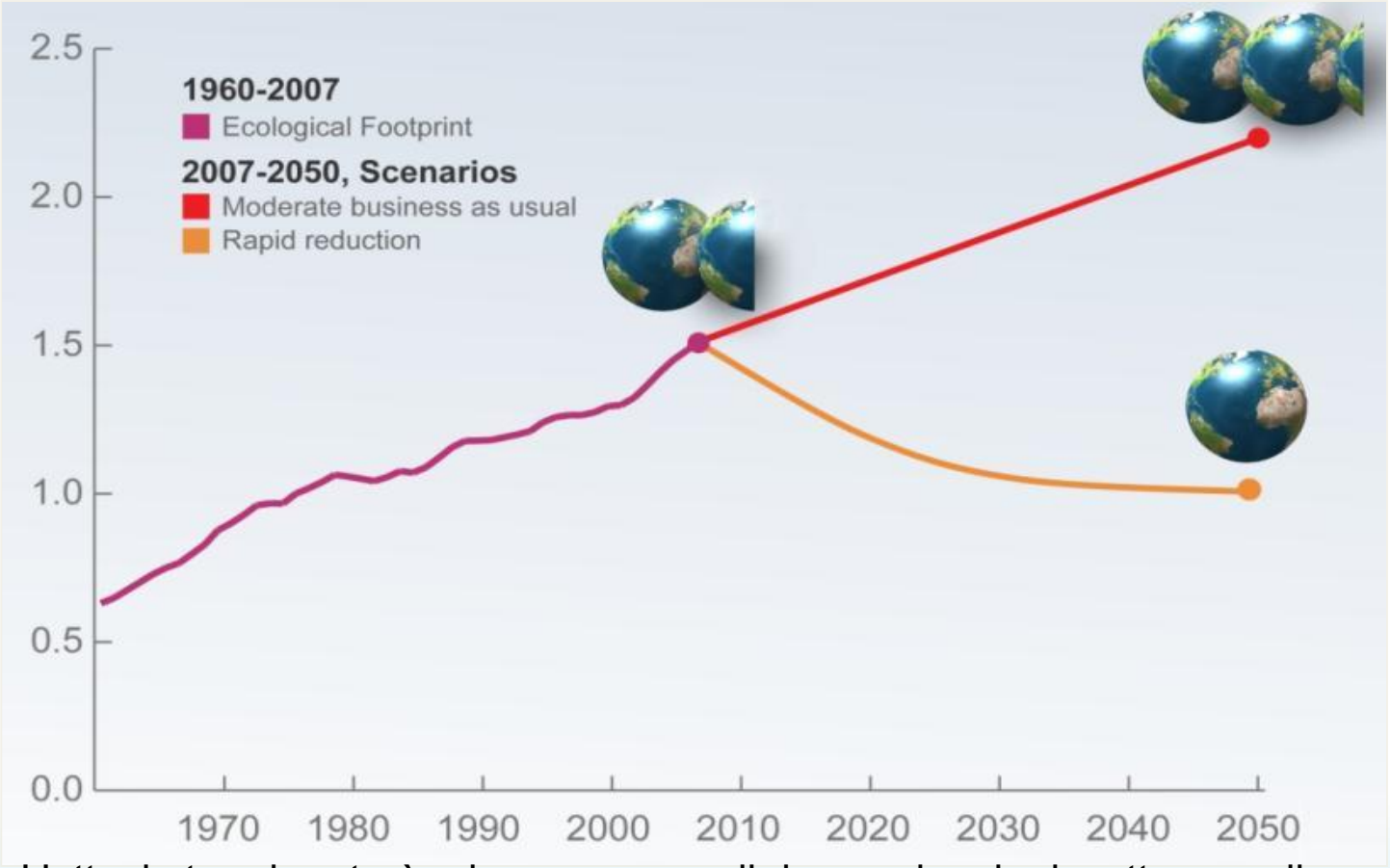
Consumo delle risorse



L'attuale trend porterà ad un consumo di risorse doppie rispetto a quelle disponibili. La sostenibilità ambientale deve estendersi a tutti gli elementi del costruito. Bisogna pensare globalmente

Sistema di certificazione Envision®

ACEC Council of Engineering Companies

APWA American Public Works Association

ASCE American Society of Civil Engineers

INSTITUTE FOR SUSTAINABLE INFRASTRUCTURE
ISI

+

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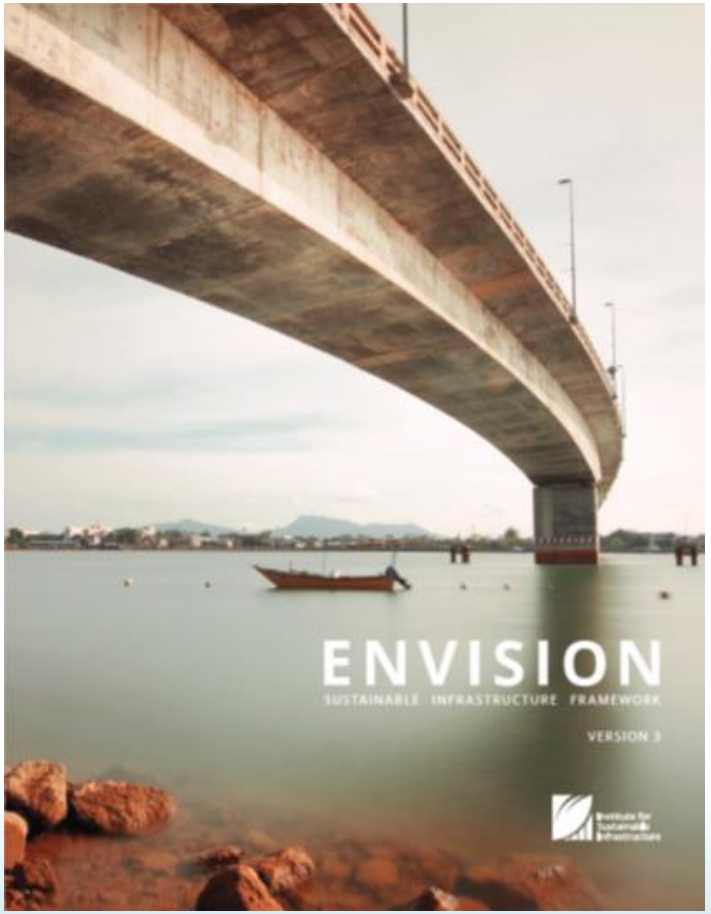
FOR SUSTAINABLE INFRASTRUCTURE
Graduate School of Design
Harvard University

La collaborazione tra **ISI** ed il "Program for Sustainable Infrastructure" dell'**Università di Harvard** ha sviluppato il sistema di certificazione per infrastrutture Envision™.

Il sistema è stato progettato per essere applicato a tutti i tipi di infrastrutture.



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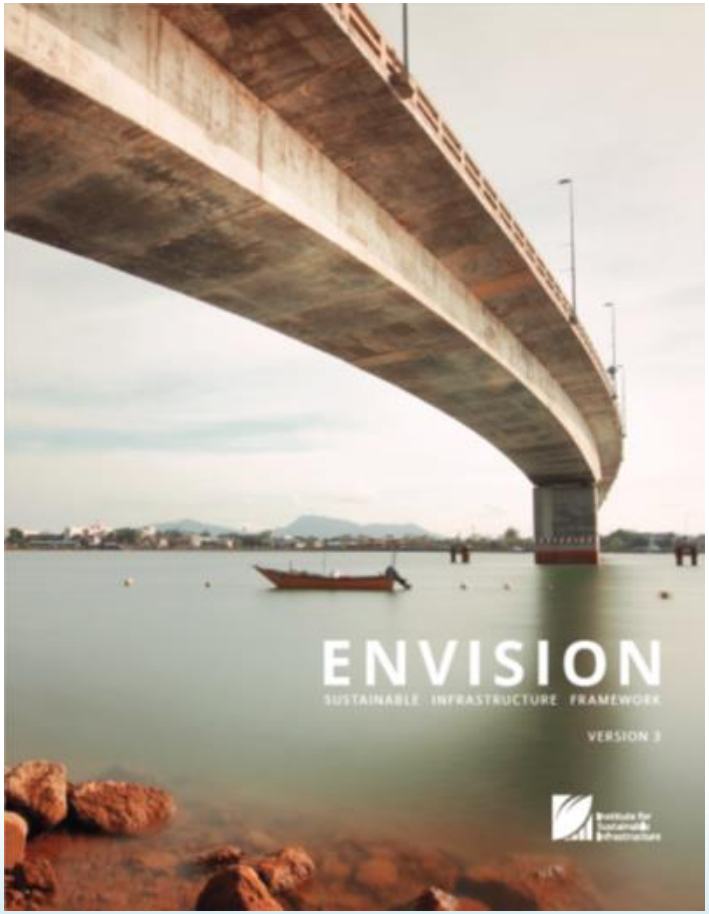
Sistema di certificazione Envision®

Envision™ è un sistema "aperto"

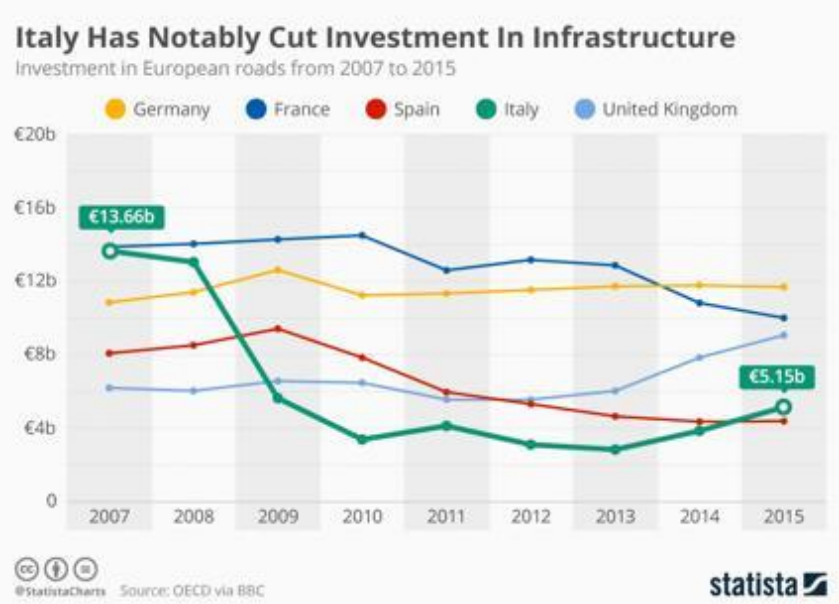
Il Protocollo è disponibile gratuitamente sul sito www.sustainableinfrastructure.org
Nel sito è disponibile anche uno scoresheet per effettuare una autovalutazione del progetto con il calcolo automatico del punteggio raggiunto.

Oltre 1.000 progetti nel mondo hanno utilizzato o stanno usando il Protocollo Envision™.
59 sono i progetti registrati per la certificazione: 50 hanno già ottenuto il riconoscimento.
Fra questi progetti: due impianti di trattamento acque, una rete idropotabile, una strada, una facility industriale per itticoltura, un parco eolico, programmi di riqualificazione aree



Le infrastrutture in Italia

- L'Italia ha un **grande bisogno di infrastrutture**
- Negli ultimi dieci anni gli **investimenti** sono stati costantemente ridotti
- Germania, Francia e Regno Unito hanno investito di più negli ultimi dieci anni
- **L'infrastruttura esistente non viene mantenuta** a livello standard
- È necessario migliorare la **durabilità** e la **resilienza**
- Una **valutazione economica del ciclo di vita** è una metodologia utile per il processo decisionale
- L'**accettazione sociale** e il **rispetto dell'ambiente** sono gli altri elementi fondamentali



- In una parola: **SOSTENIBILITÀ**

La sostenibilità degli edifici in Italia

- Nel **2009**, con GBC Italia è iniziato l'utilizzo di Leed per gli edifici
- Ora ci sono **144 progetti certificati** per un totale di 2,4 milioni di mq
- Sono in cantiere **297 progetti** per un totale di 2,9 milioni di mq
- In Italia è ora presente una buona **conoscenza della sostenibilità per gli edifici**
- Ci sono circa 100 Leed AP e Leed GA
- Iniziamo anche con le **infrastrutture**: oltre **100 ENV SP**

Grafico 2 – Numero di progetti LEED registrati in Italia suddiviso per anni

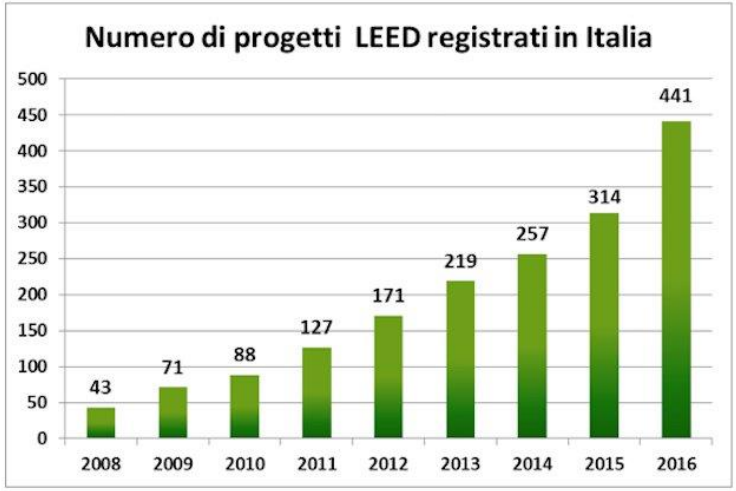
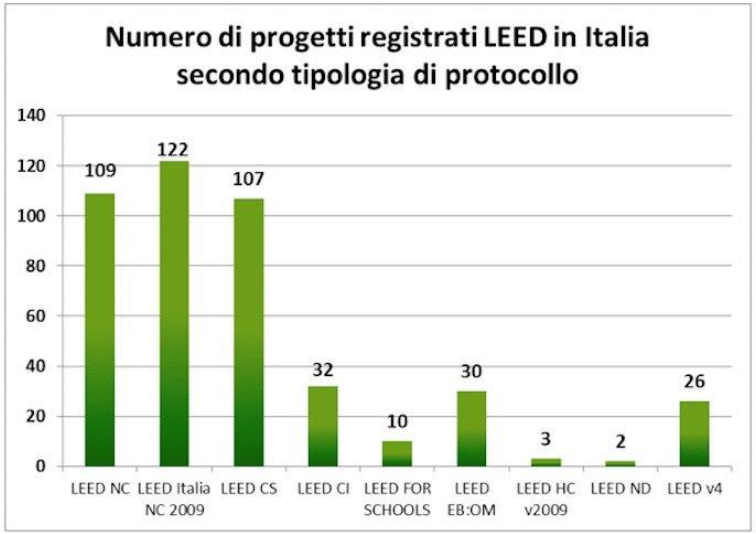


Grafico 1 - Numero di progetti LEED secondo la famiglia di protocollo



Parallelismo: Envision e LEED

ENVISION

Tutti i tipi di infrastrutture

Focus su integrazione e convenienza

Edifici e opere annesse

Focus su Performance

Le infrastrutture sono caratterizzate da risorse e vincoli di molteplici enti e stakeholders, con diversi obiettivi, esigenze e fondi.

Envision valuta la sostenibilità dell'infrastruttura dell'ambiente dal punto di vista sociale (comunità), economico (efficienza) e ambientale (ecosistema).

Alla domanda: **STIAMO FACENDO IL PROGETTO BENE?**

Si aggiunge: **STIAMO FACENDO IL PROGETTO GIUSTO?**

ICMQ Stantec

Quali tipi di infrastrutture sono certificabili con Envision®?

ENERGIA

- Geotermico
- Idroelettrico
- Nucleare
- Carbone
- Gas Naturale
- Petrolio
- Eolico
- Solare
- Biomasse

ACQUA

- Distribuzione Acqua Potabile
- Raccolta e Conservazione
- Riutilizzo
- Trattamento Acque meteoriche
- Controllo Inondazioni

RIFIUTI

- Rifiuti Solidi
- Riciclo
- Rifiuti Pericolosi
- Raccolta e Gestione

TRASPORTI

- Aeroporti
- Strade
- Autostrade
- Mobilità Dolce
- Ferrovie
- Trasporto Pubblico
- Porti
- Canali

PAESAGGIO

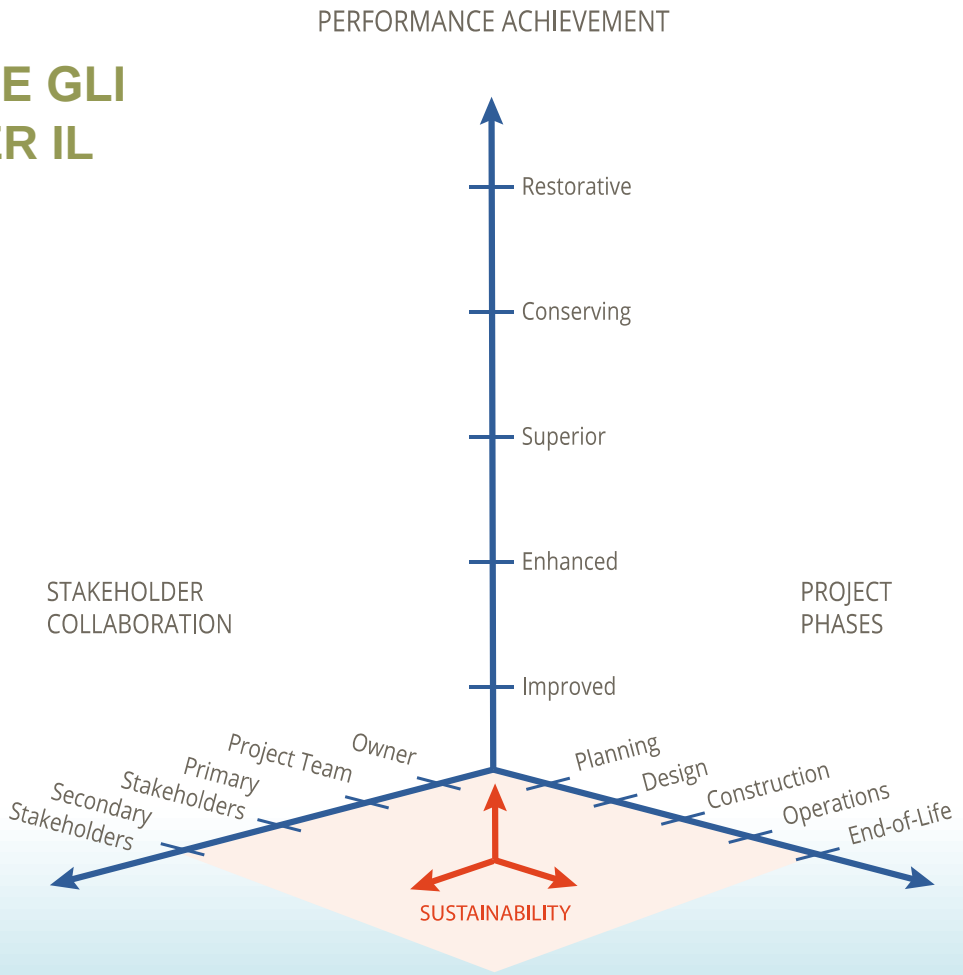
- Public Realm
- Parchi
- Servizi Ecosistemici

INFORMAZIONE

- Telecomunicazioni
- Internet
- Satelliti
- Centri dati
- Stazioni di monitoraggio

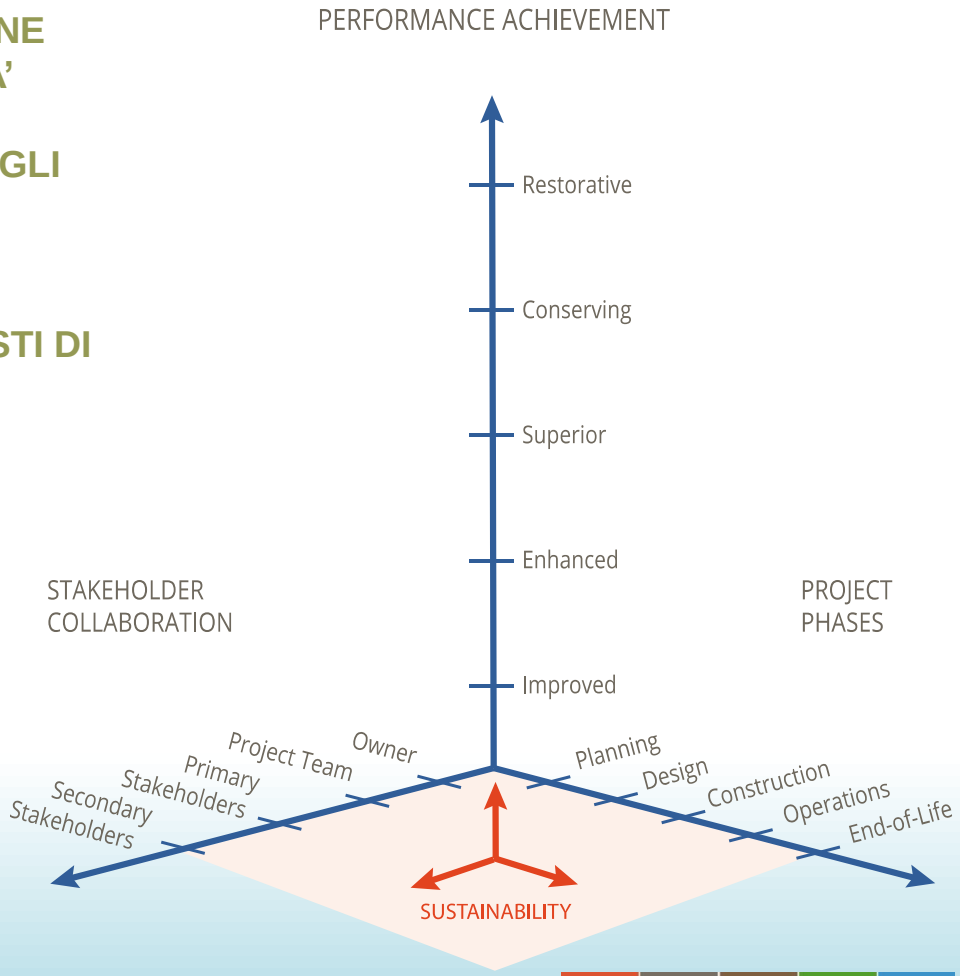
Obiettivi di Envision®

- **AUMENTARE LE OPPORTUNITA' E GLI OBIETTIVI DA CONSIDERARE PER IL MIGLIORAMENTO DELLE PERFORMANCE**
- **ESTENDERE LA VITA UTILE DEL PROGETTO**
- **VALUTARE GLI IMPATTI DEI CAMBIAMENTI CLIMATICI E DEL CONTORNO**
- **FOCUS SU CONVENIENZA E INTEGRAZIONE NEL SISTEMA INFRASTRUTTURALE**
- **PREMIARE L'INNOVAZIONE**



Vantaggi di Envision® per il progetto

- **INDIRIZZA IL PROGETTO VERSO UNA GESTIONE PIANIFICATA E CONSENTE UNA VALIDAZIONE TERZA DEL CONTENUTO DI SOSTENIBILITA'**
- **ENFATIZZA E CONSENTE DI VALORIZZARE GLI ASPETTI DI GESTIONE E MANUTENZIONE DELL'INFRASTRUTTURA**
- **CONSENTE UN EFFICIENTAMENTO DEI COSTI DI GESTIONE DELL'INFRASTRUTTURA**
- **ANTICIPA E STRUTTURA IL DIALOGO CON IL TERRITORIO E GLI STAKEHOLDERS E CHIARISCE I RUOLI OPERATIVI**
- **PREDISPONE ALL'INNOVAZIONE**



Benefici per la committenza e la comunità

Fornisce obiettivi e soluzioni circa la sostenibilità del progetto nei confronti di:

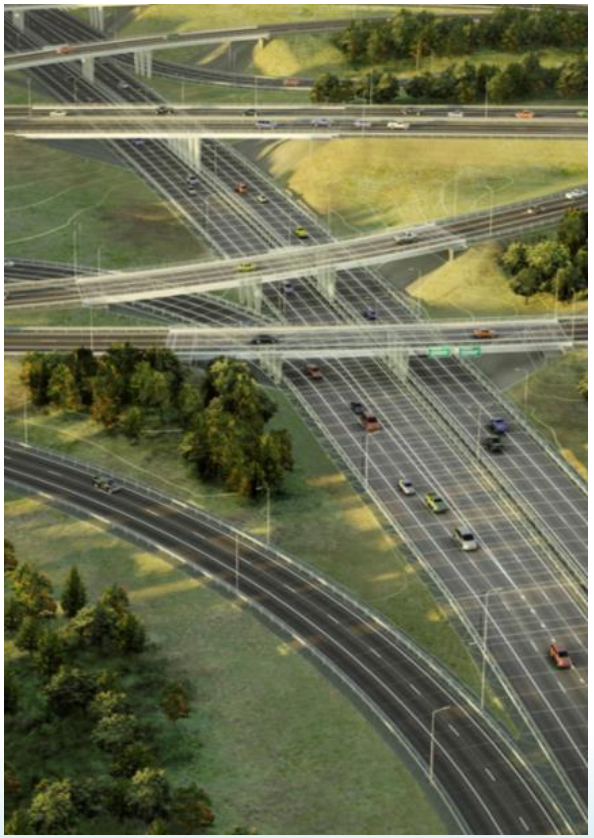
- **Benessere della comunità**
- **Uso delle risorse e dell'energia**
- **Impatto sull'ambiente e sul mondo naturale**
- **Clima e rischi connessi ai cambiamenti climatici**

Favorisce il coinvolgimento degli stakeholder

Giustifica e struttura il decision-making

Permette un migliore controllo e trasparenza delle fasi operative e riduce i tempi di 'accettazione' dell'impatto

Favorisce l'informazione e il consenso dell'opinione pubblica



I Crediti di Envision

Quality Of Life
14 Credits

WELLBEING
QL1.1 Improve Community Quality of Life
QL1.2 Enhance Public Health & Safety
QL1.3 Improve Construction Safety
QL1.4 Minimize Noise & Vibration
QL1.5 Minimize Light Pollution
QL1.6 Minimize Construction Impacts

MOBILITY
QL2.1 Improve Community Mobility & Access
QL2.2 Encourage Sustainable Transportation
QL2.3 Improve Access & Wayfinding

COMMUNITY
QL2.1 Advance Equity & Social Justice
QL2.2 Preserve Historic & Cultural Resources
QL2.3 Enhance Views & Local Character
QL2.4 Enhance Public Space & Amenities

QL0.0 Innovate or Exceed Credit Requirements

Leadership
12 Credits

COLLABORATION
LD1.1 Provide Effective Leadership & Commitment
LD1.2 Foster Collaboration & Teamwork
LD1.3 Provide for Stakeholder Involvement
LD1.4 Pursue Byproduct Synergies

PLANNING
LD2.1 Establish a Sustainability Management Plan
LD2.2 Plan for Sustainable Communities
LD2.3 Plan for Long-Term Monitoring & Maintenance
LD2.4 Plan for End-of-Life

ECONOMY
LD3.1 Stimulate Economic Prosperity & Development
LD3.2 Develop Local Skills & Capabilities
LD3.3 Conduct a Life-Cycle Economic Evaluation

LD0.0 Innovate or Exceed Credit Requirements

Resource Allocation
14 Credits

MATERIALS
RA1.1 Support Sustainable Procurement Practices
RA1.2 Use Recycled Materials
RA1.3 Reduce Operational Waste
RA1.4 Reduce Construction Waste
RA1.5 Balance Earthwork On Site

ENERGY
RA2.1 Reduce Operational Energy Consumption
RA2.2 Reduce Construction Energy Consumption
RA2.3 Use Renewable Energy
RA2.4 Commission & Monitor Energy Systems

WATER
RA3.1 Preserve Water Resources
RA3.2 Reduce Operational Water Consumption
RA3.3 Reduce Construction Water Consumption
RA3.4 Monitor Water Systems

RA0.0 Innovate or Exceed Credit Requirements

Natural World
14 Credits

SITING
NW1.1 Preserve Sites of High Ecological Value
NW1.2 Provide Wetland & Surface Water Buffers
NW1.3 Preserve Prime Farmland
NW1.4 Preserve Undeveloped Land

CONSERVATION
NW2.1 Reclaim Brownfields
NW2.2 Manage Stormwater
NW2.3 Reduce Pesticide & Fertilizer Impacts
NW2.4 Protect Surface & Groundwater Quality

ECOLOGY
NW3.1 Enhance Functional Habitats
NW3.2 Enhance Wetland & Surface Water Functions
NW3.3 Maintain Floodplain Functions
NW3.4 Control Invasive Species
NW3.5 Protect Soil Health

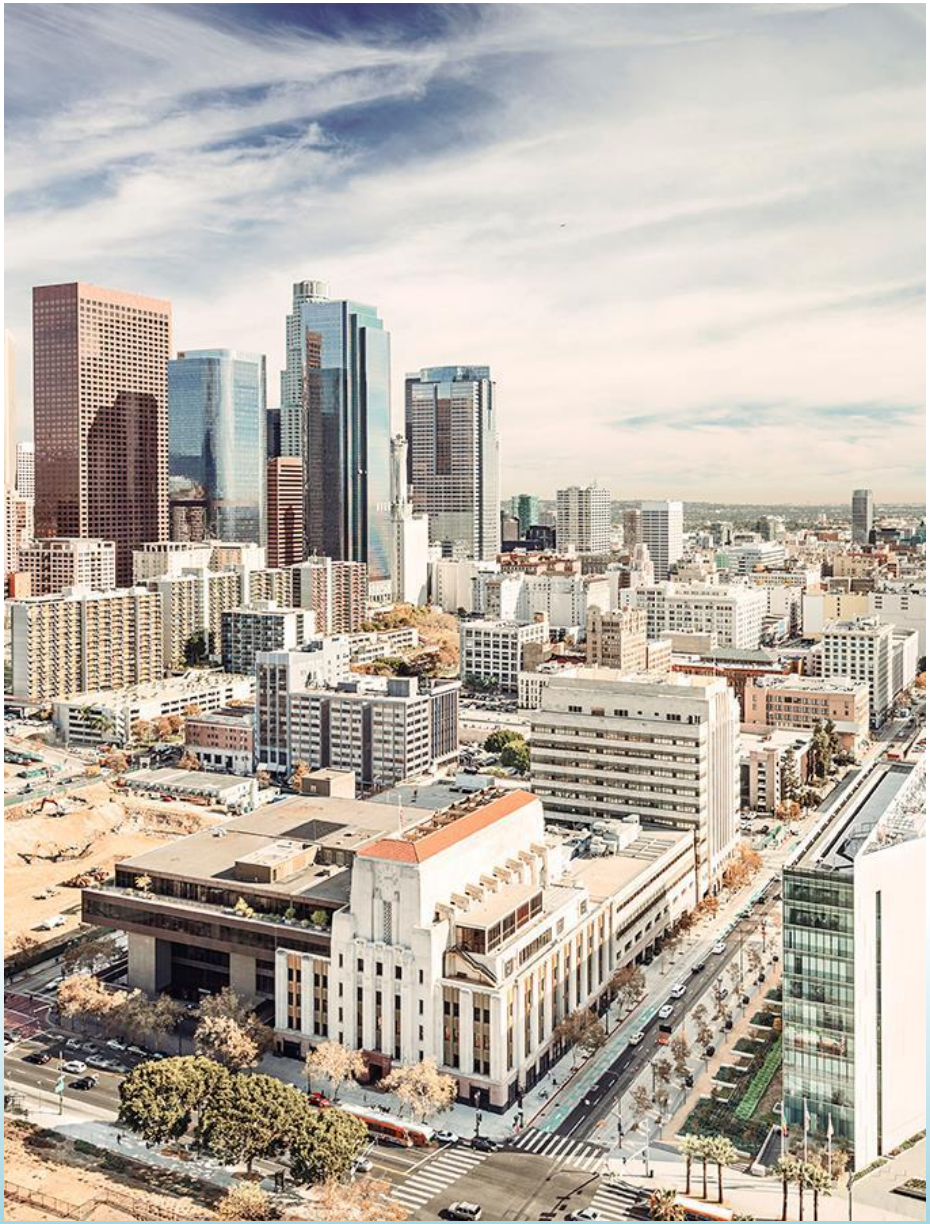
NW0.0 Innovate or Exceed Credit Requirements

Climate and Resilience
10 Credits

EMISSIONS
CR1.1 Reduce Net Embodied Carbon
CR1.2 Reduce Greenhouse Gas Emissions
CR1.3 Reduce Air Pollutant Emissions

RESILIENCE
CR2.1 Avoid Unsuitable Development
CR2.2 Assess Climate Change Vulnerability
CR2.3 Evaluate Risk & Resilience
CR2.4 Establish Resilience Goals and Strategies
CR2.5 Maximize Resilience
CR2.6 Improve Infrastructure Integration

CR0.0 Innovate or Exceed Credit Requirements



QUALITY OF LIFE

Wellbeing

Mobility

Community

- Migliorare la crescita e lo sviluppo sostenibile delle comunità e degli aspetti funzionali correlati
- Migliorare il benessere e le modalità di trasporto alternative
- Preservare le risorse storiche, culturali, naturali
- Allineamento con gli obiettivi degli stakheholder e della comunità

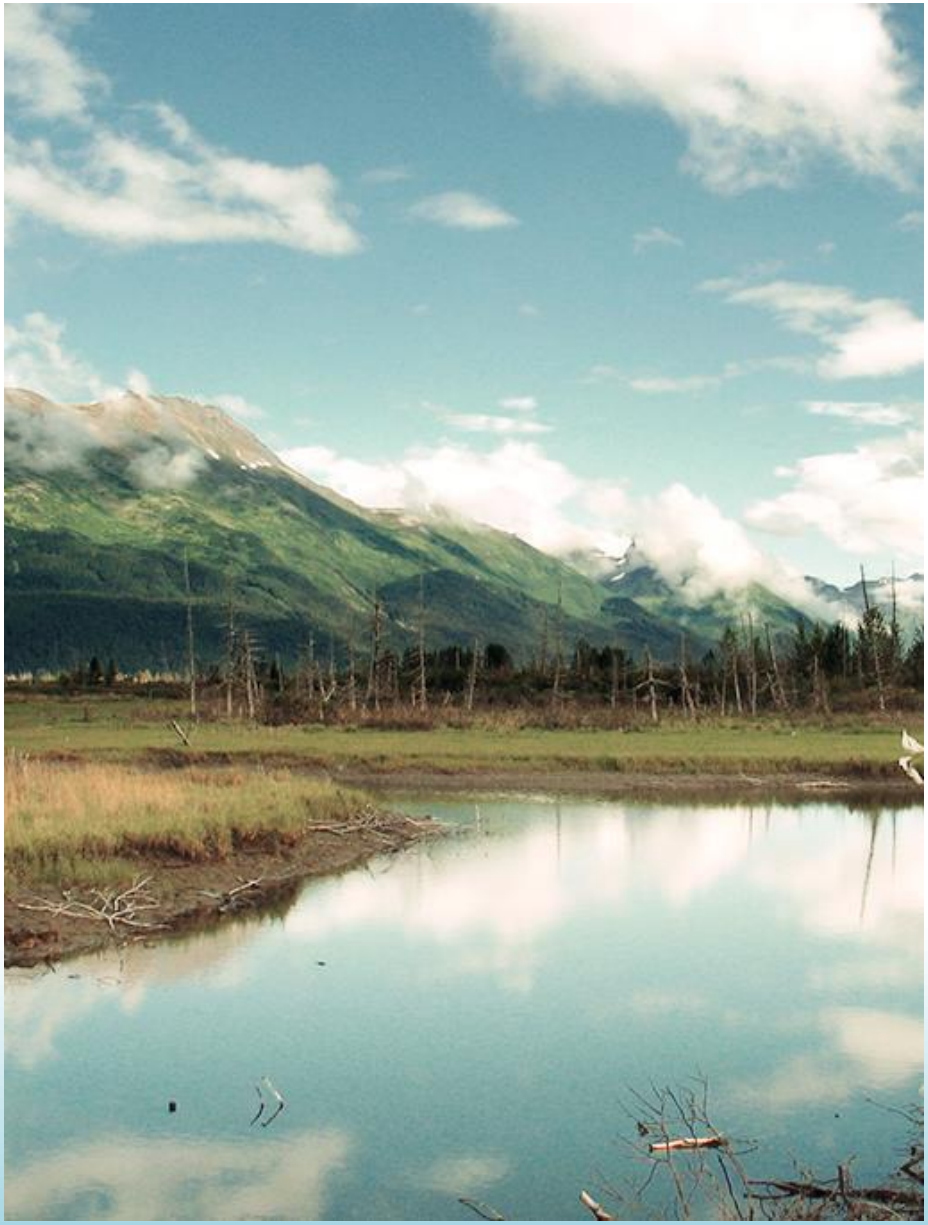
LEADERSHIP

Collaboration

Planning

Economy

- Garantire un impegno significativo e la collaborazione tra committente e team di progetto
- Definire e implementare meccanismi e processi di gestione della sostenibilità
- Effettuare piani di monitoraggio a lungo termine ed estendere la vita utile dell’infrastruttura



RESOURCE ALLOCATION

Materials

Energy

Water

- Ridurre l’uso e l’intensità delle risorse e minimizzare i rifiuti
- Ridurre i consumi energetici e utilizzare fonti rinnovabili
- Ridurre i consumi idrici e preservare le fonti potabili
- Monitorare le prestazioni dei sistemi

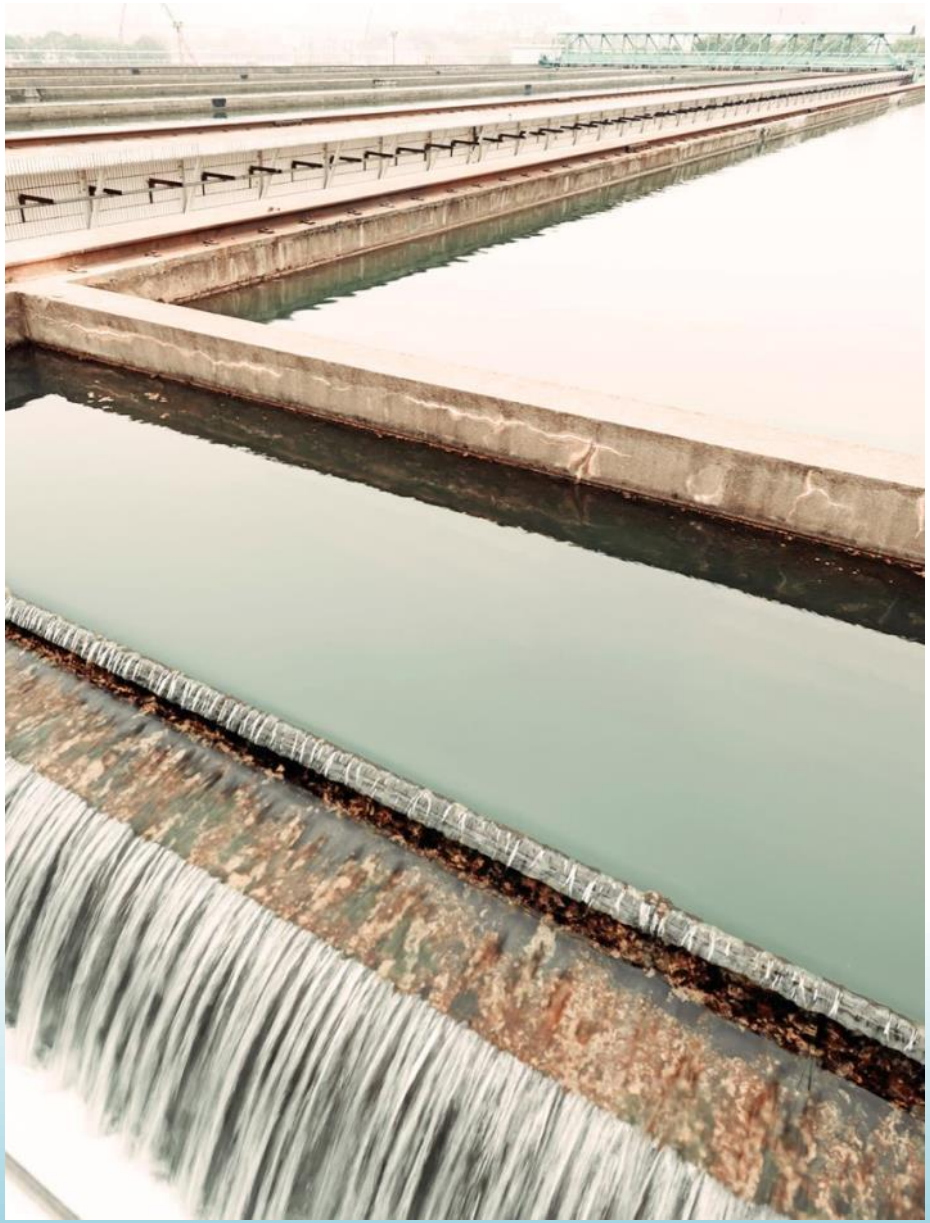
NATURAL WORLD

Siting

Conservation

Ecology

- Proteggere i siti e gli habitat ad alto valore ecologico/ambientale/ faunistico/agricolo
- Preservare la biodiversità e gli ecosistemi
- Preservare, mantenere e rigenerare i corpi idrici superficiali e sotterranei



CLIMATE & RESILIENCE

Emissions

Resilience

- Ridurre le emissioni dannose e minimizzare gli impatti futuri durante tutta la vita utile dell’infrastruttura
- Progettare infrastrutture resilienti e in grado di adattarsi ai cambiamenti a breve e a lungo termine
- Valutare i rischi e le vulnerabilità e definire delle strategie per la resilienza

La struttura del Protocollo Envision

QUALITY OF LIFE: WELLBEING

QL1.1 Improve Community Quality of Life

26 POINTS

INTENT

Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.

METRIC

Measures taken to assess community needs and improve quality of life while minimizing negative impacts.

LEVELS OF ACHIEVEMENT

IMPROVED	ENHANCED	SUPERIOR	CONSERVING	RESTORATIVE
A+B	A+B+C+D	A+B+C+D+E	A+B+C+D+E+F	A+B+C+D+E+F+G
(2) Community Considerations	(5) Community Linkages	(10) Broad Community Alignment	(20) Holistic Assessment & Collaboration	(26) Protecting The Future
(A) The project team identifies and takes into account community needs, goals, and issues. For example, the project team has located and reviewed the most recent community planning information and assessed relevant community needs, goals, and/or issues.				
(B) The project meets or supports community needs and/or goals.				
	(C) The project assesses the social impacts it will have on the host and affected communities' quality of life.			
	(D) The affected communities are meaningfully engaged in identifying how the project supports community needs and/or goals.			
		(E) Based on the social assessment, potential negative impacts on the host or nearby affected communities are mitigated following a hierarchy that prioritizes avoidance, minimization, restoration, and offsetting.		
			(F) Community satisfaction is demonstrated by feedback from the stakeholder engagement process verifying actions taken in criteria A, B, C, and D.	
				(G) The project proactively addresses trends in changing social, economic, and/or environmental conditions within the community in order to ensure a high quality of life over the long term.

DESCRIPTION

This credit addresses the extent to which a project contributes to the quality of life of the host and affected communities. As this can be subjective, the credit criteria address how well the project team has identified, assessed, and incorporated community needs, goals, and issues into the project. Relevant community plans are assumed to be a viable expression of those needs, goals, objectives, and aspirations. In a real sense, they are the community's desired quality of life.

Unfortunately, infrastructure projects are often perceived as having negative impacts on communities. This "not in my back yard" (NIMBY) mentality can be addressed through active engagement and the proper alignment of projects with community needs, goals, and issues. Community support and engagement are critical to ensure the appropriate and effective investment of resources in infrastructure. Project teams and owners should consider how aligning the project with community goals reduces the risk of community conflicts that disrupt project delivery and increase cost.

PERFORMANCE IMPROVEMENT

Improved: The project team can demonstrate an understanding of the community needs, goals, and issues, and communicate how the project meets or supports those goals.

Enhanced: Communication and interactions with community stakeholders are essential to reaffirm and improve the project objectives. The project team works closely with community stakeholders to identify and assess potential social impacts. Social impacts include the intended and unintended social consequences, both positive and negative, of infrastructure projects and any social changes initiated by those projects.

Superior: Infrastructure projects often include difficult trade-offs involving positive and negative impacts, and a project designed to benefit one community may have adverse effects on others. In addition, the needs of a community may conflict with their expressed goals. Because positive impacts in all dimensions of performance may not be possible, the credit seeks a net positive impact. Importantly, the project benefits and impacts should be equitably distributed throughout the host and affected communities.

Conserving: Community satisfaction is the metric for quality of life. It should be evident that the community truly understands the full impact (positive and negative) of the project and is satisfied that it addresses their needs and goals while appropriately mitigating negative impacts. Documentation of community endorsement should be as broad as possible and specific to the requested documentation.

Restorative: The project team proactively identifies instances where long-term trends in socioeconomic or environmental conditions may undermine existing community aspirations and addresses them in the project.

Applicability: It is likely that all projects have the ability to align project objectives with community needs and goals, identified through active engagement, in order to achieve broad community satisfaction. It would therefore be difficult to demonstrate that the credit is not relevant or applicable to a project seeking an Envision award.

EVALUATION CRITERIA AND DOCUMENTATION GUIDANCE

A. Has the project team identified and taken into account community needs, goals, and issues?

1. *Documentation that the project team has located and reviewed the most recent community planning information and assessed relevant community needs, goals, and/or issues. For example, meeting minutes with key stakeholders, community leaders, and decision makers; letters; and memoranda.*

B. Does the project meet or support the needs and goals of the host and/or affected communities?

1. *Evidence showing a comparison of the project vision and goals to the needs, goals, and/or issues of the community.*

C. Has the project team assessed the social impacts the project will have on the host and affected communities' quality of life?

1. *Assessing, identifying and evaluating the positive and negative social impacts of the project on affected communities' quality of life (e.g., a social impact assessment). Expectations for the depth and breadth of documentation are commensurate with the scale of the project and its impact on the broader community. Informal assessments are acceptable for small projects, provided that project teams present evidence supporting their conclusions.*

D. Have the affected communities been meaningfully engaged in identifying how the project meets community needs and/or goals?

1. *Documentation of processes for collecting, evaluating, and incorporating community input into the planning and design process (e.g., meetings, design charrettes, and communications with representatives of affected communities).*

E. Has the project team addressed negative social impacts?

1. *Evidence showing the extent to which options for mitigating negative impacts were identified and prioritized, and reasonable changes to the project made. Strategies for mitigating negative impacts should follow a hierarchy prioritizing avoidance, minimization, restoration, and offsetting.*

F. Are the affected communities satisfied that the project addresses their needs and goals as well as mitigates negative impacts?

1. *Acknowledgments and endorsements by the community that the design participation process was helpful and that their input was appropriately assessed and incorporated into project design.*
2. *Documentation of input and agreement from key stakeholders, community leaders, and/or decision makers regarding the impact assessment and planned action(s) (e.g., community satisfaction surveys, interviews with representatives of affected communities, comments and reactions from social media platforms). Specific statements about critical issues or actions taken within the project are better indicators of a true understanding of the project's impacts than general endorsements of the project as a whole. Evidence of community satisfaction and endorsement of plans includes:*
   a. *Community endorsement of the project team's assessment of their needs or goals per criterion A.*
   b. *Community endorsement that the project as proposed will address their needs or goals per criterion B.*
   c. *Documentation that the community understands and accepts potential impacts of the project per criterion C.*
   d. *Community endorsement of project strategies to mitigate negative impacts per criterion D.*

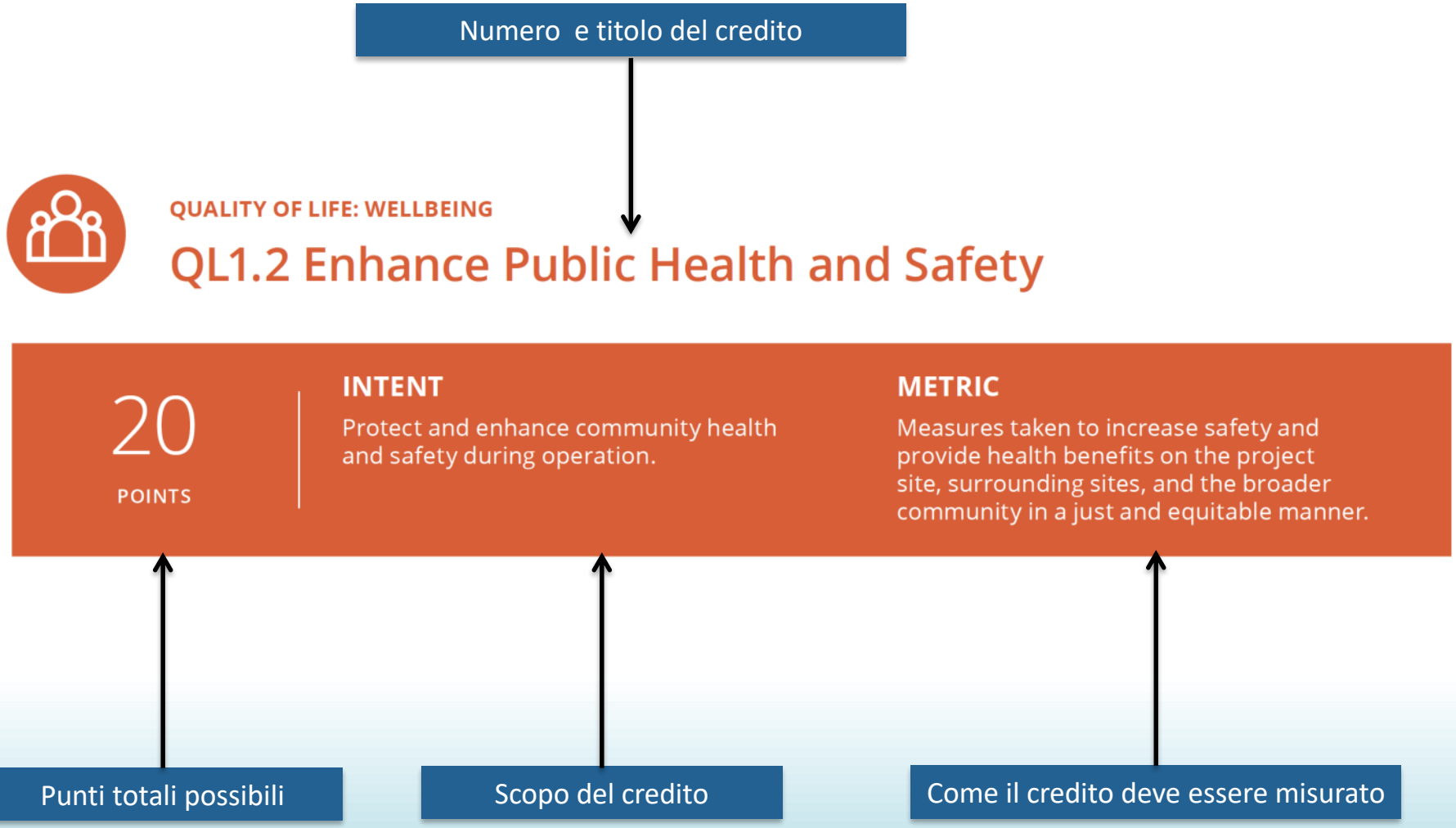
G. Does the project proactively address long-term social, economic, or environmental changes that impact quality of life?

1. *Documentation of long-term social, economic, or environmental changes/trends that may impact community goals and needs over time (e.g., aging population, economic transitions, or the degradation of the environment and ecosystem services). Note that social, economic, and environmental shifts are often connected. The degradation of the environment in a coastal community dependent on tourism and fishing negatively impacts the economy, which can lead to social impacts such as shrinking population. Consequently, the quality of life of the community is put at risk.*
2. *Documentation demonstrating how the project will proactively address one or more of these changes/trends.*
3. *Documentation demonstrating how the project represents a smart long-term investment for the community's future.*

RELATED ENVISION CREDITS

QL1.2 Enhance Public Health & Safety
QL2.3 Improve Access & Wayfinding
LD1.3 Provide for Stakeholder Involvement
LD2.2 Plan for Sustainable Communities
LD3.1 Stimulate Economic Prosperity & Development
CR2.5 Maximize Resilience

La struttura del Protocollo Envision



La struttura del Protocollo Envision

Titolo e punteggio relativo

LEVELS OF ACHIEVEMENT

IMPROVED	ENHANCED	SUPERIOR	CONSERVING	RESTORATIVE
A	A + B	A + B + C	A + B + C + D	A + B + C + D + E
(4) Sustainability Indicators	**(6) Alternative Analysis**	**(9) Sustainability Assessment**	**(12) Sustainable Planning**	**(16) More Sustainable Communities**

(A) Sustainability indicators or outcomes are considered in project selection/identification and planning.

(B) Sustainable performance is included in alternative analyses during project identification. Alternatives include the sustainability of a "no-build" option.

(C) During project identification, the project's potential impact to broader external systems is assessed, such as growth patterns, congestion, energy and water demand/production, and how these impact the overall long-term sustainability of the community or region.

(D) The project is part of a comprehensive sustainable development plan at the level of the infrastructure system, municipality/community, or region. The project demonstrates a direct connection and contribution to achieving specific sustainable development goals identified in the plan.

Criteri di valutazione e Documentazione

(E) The project addresses an inherently unsustainable condition within the community.

Livelli di Achievement

IMPROVED	Performance un po' più che convenzionale. INCORAGGIANTE
ENHANCED	Performance di sostenibilità SULLA STRADA GIUSTA.
SUPERIOR	Performance di sostenibilità NOTEVOLE, ma non ancora *conservativa*.
CONSERVING	Performance di sostenibilità che ha raggiunto ZERO IMPATTI NEGATIVI.
RESTORATIVE	Performance di sostenibilità che RIPRISTINA i sistemi naturali, sociali ed economici.

Punteggi del Sistema di Rating

			Improved	Enhanced	Superior	Conserving	Restorative
Quality of Life	Wellbeing	QL1.1 Improve Community Quality of Life	2	5	10	20	26
		QL1.2 Enhance Public Health & Safety	2	7	12	16	20
		QL1.3 Improve Construction Safety	2	5	10	14	—
		QL1.4 Minimize Noise & Vibration	1	3	6	10	12
		QL1.5 Minimize Light Pollution	1	3	6	10	12
		QL1.6 Minimize Construction Impacts	1	2	4	8	—
	Mobility	QL2.1 Improve Community Mobility	1	3	7	11	14
		QL2.2 Encourage Sustainable Transportation	—	5	8	12	16
		QL2.3 Improve Access & Wayfinding	1	5	9	14	—
	Community	QL3.1 Advance Equity & Social Justice	3	6	10	14	18
		QL3.2 Preserve Historic & Cultural Resources	—	2	7	12	18
		QL3.3 Enhance Views & Local Character	1	3	7	11	14
		QL3.4 Enhance Public Space & Amenities	1	3	7	11	14
							200

PUNTEGGIO MAX PER OGNI CATEGORIA → **SOMMA DEI PUNTEGGI MASSIMI PER OGNI CREDITO**

			Improved	Enhanced	Superior	Conserving	Restorative	Maximum Points
Quality of Life	Wellbeing	QL1.1 Improve Community Quality of Life	2	5	10	20	26	200
		QL1.2 Enhance Public Health & Safety	2	7	12	16	20	
		QL1.3 Improve Construction Safety	2	5	10	14	—	
		QL1.4 Minimize Noise & Vibration	1	3	6	10	12	
		QL1.5 Minimize Light Pollution	1	3	6	10	12	
		QL1.6 Minimize Construction Impacts	1	2	4	8	—	
	Mobility	QL2.1 Improve Community Mobility	1	3	7	11	14	
		QL2.2 Encourage Sustainable Transportation	—	5	8	12	16	
		QL2.3 Improve Access & Wayfinding	1	5	9	14	—	
	Community	QL3.1 Advance Equity & Social Justice	3	6	10	14	18	
		QL3.2 Preserve Historic & Cultural Resources	—	2	7	12	18	
		QL3.3 Enhance Views & Local Character	1	3	7	11	14	
		QL3.4 Enhance Public Space & Amenities	1	3	7	11	14	
Leadership	Collaboration	LD1.1 Provide Effective Leadership & Commitment	2	5	12	18	—	182
		LD1.2 Foster Collaboration & Teamwork	2	5	12	18	—	
		LD1.3 Provide for Stakeholder Involvement	3	6	9	14	18	
		LD1.4 Pursue Byproduct Synergies	3	6	12	14	18	
	Planning	LD2.1 Establish a Sustainability Management Plan	4	7	12	18	—	
		LD2.2 Plan for Sustainable Communities	4	6	9	12	16	
		LD2.3 Plan for Long-Term Monitoring & Maintenance	2	5	8	12	—	
		LD2.4 Plan for End-of-Life	2	5	8	14	—	
	Economy	LD3.1 Stimulate Economic Prosperity & Development	3	6	12	20	—	
		LD3.2 Develop Local Skills & Capabilities	2	4	8	12	16	
		LD3.3 Conduct a Life-Cycle Economic Evaluation	5	7	10	12	14	
Resource Allocation	Materials	RA1.1 Support Sustainable Procurement Practices	3	6	9	12	—	196
		RA1.2 Use Recycled Materials	4	6	9	16	—	
		RA1.3 Reduce Operational Waste	4	7	10	14	—	
		RA1.4 Reduce Construction Waste	4	7	10	16	—	
		RA1.5 Balance Earthwork On Site	2	4	6	8	—	
	Energy	RA2.1 Reduce Operational Energy Consumption	6	12	18	26	—	
		RA2.2 Reduce Construction Energy Consumption	1	4	8	12	—	
		RA2.3 Use Renewable Energy	5	10	15	20	24	
		RA2.4 Commission & Monitor Energy Systems	3	6	12	14	—	
	Water	RA3.1 Preserve Water Resources	3	5	7	9	12	
		RA3.2 Reduce Operational Water Consumption	4	9	13	17	22	
		RA3.3 Reduce Construction Water Consumption	1	3	5	8	—	
		RA3.4 Monitor Water Systems	1	3	6	12	—	
Natural World	Siting	NW1.1 Preserve Sites of High Ecological Value	2	6	12	16	22	232
		NW1.2 Provide Wetland & Surface Water Buffers	2	5	10	16	20	
		NW1.3 Preserve Prime Farmland	—	2	8	12	16	
		NW1.4 Preserve Undeveloped Land	3	8	12	18	24	
	Conservation	NW2.1 Reclaim Brownfields	11	13	16	19	22	
		NW2.2 Manage Stormwater	2	4	9	17	24	
		NW2.3 Reduce Pesticide & Fertilizer Impacts	1	2	5	9	12	
		NW2.4 Protect Surface & Groundwater Quality	2	5	9	14	20	
	Ecology	NW3.1 Enhance Functional Habitats	2	5	9	15	18	
		NW3.2 Enhance Wetland & Surface Water Functions	3	7	12	18	20	
		NW3.3 Maintain Floodplain Functions	1	3	7	11	14	
		NW3.4 Control Invasive Species	1	2	6	9	12	
		NW3.5 Protect Soil Health	—	3	4	6	8	
Climate and Resilience	Emissions	CR1.1 Reduce Net Embodied Carbon	5	10	15	20	—	190
		CR1.2 Reduce Greenhouse Gas Emissions	8	13	18	22	26	
		CR1.3 Reduce Air Pollutant Emissions	2	4	9	14	18	
	Resilience	CR2.1 Avoid Unsuitable Development	3	6	8	12	16	
		CR2.2 Assess Climate Change Vulnerability	8	14	18	20	—	
		CR2.3 Evaluate Risk and Resilience	11	18	24	26	—	
		CR2.4 Establish Resilience Goals and Strategies	—	8	14	20	—	
		CR2.5 Maximize Resilience	11	15	20	26	—	
		CR2.6 Improve Infrastructure Integration	2	5	9	13	18	
							Maximum TOTAL Points	1,000

14	20	—
20	26	—
9	13	18
	Maximum TOTAL Points	1,000

MASSIMO PUNTEGGIO TOTALE RAGGIUNGIBILE

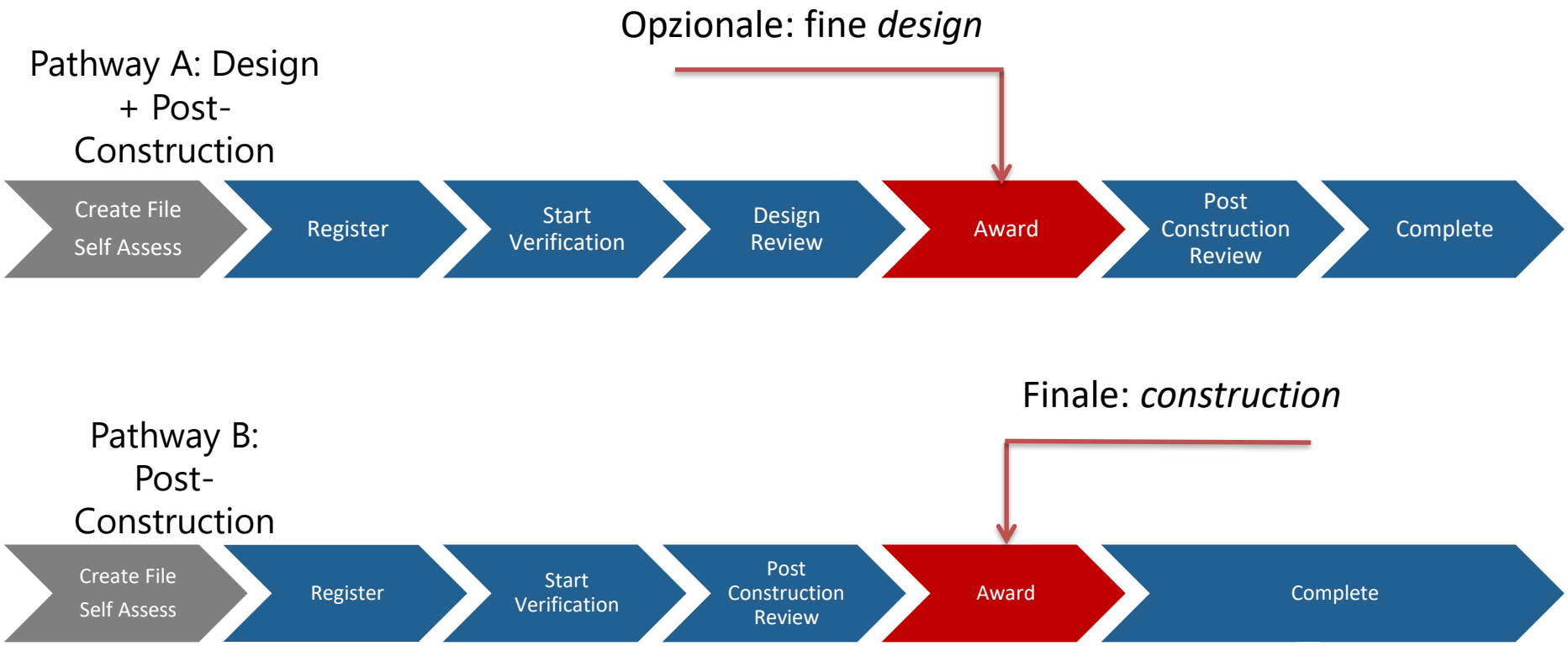
Livelli di Certificazione

20% 30% 40% 50%

RAPPORTO PERCENTUALE TRA IL PUNTEGGIO OTTENUTO E IL PUNTEGGIO MASSIMO RAGGIUNGIBILE

EVIDENZA DEL GRADO DI SOSTENIBILITÁ RAGGIUNTO DAL PROGETTO DELL'INFRASTRUTTURA

Il processo di Verifica e Certificazione



Le figure professionali: ENV SP

Envision Sustainability Professional (**ENV SP**)

Esperto del Protocollo Envision

Ruolo di **interfaccia operativa** tra il team di progetto e i verificatori

Figura obbligatoria per il processo di certificazione

PERCORSO FORMATIVO

- Completamento corso di formazione ICMQ/ISI
- Superamento di un esame ICMQ/ISI
- Mantenimento annuale delle credenziali

Envision®, ICMQ e STANTEC

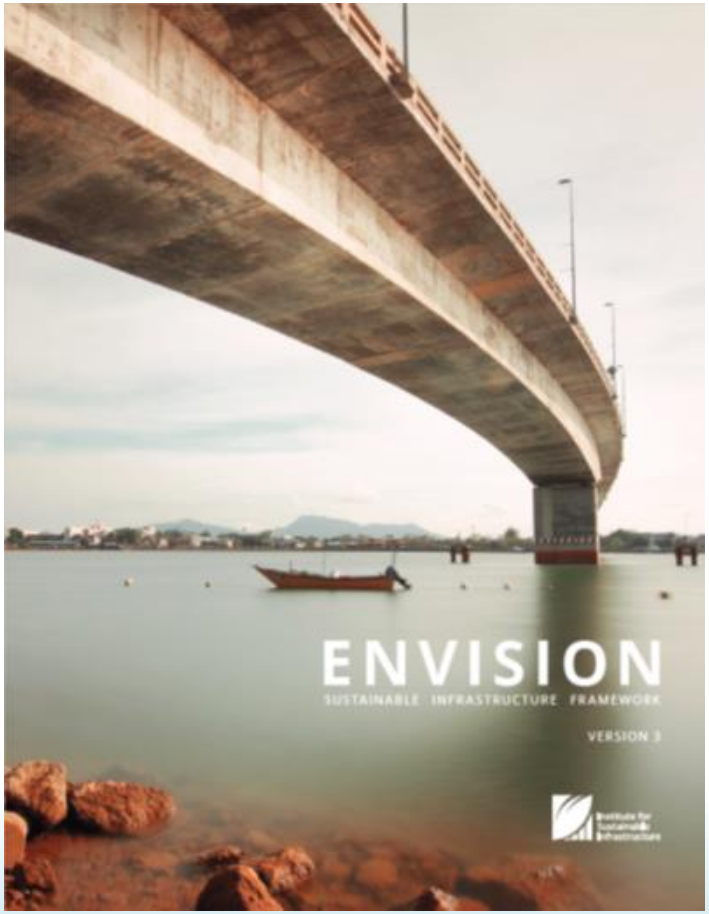
ACEC Council of Engineering Companies

APWA American Public Works Association

ASCE American Society of Civil Engineers

INSTITUTE FOR SUSTAINABLE INFRASTRUCTURE ISI

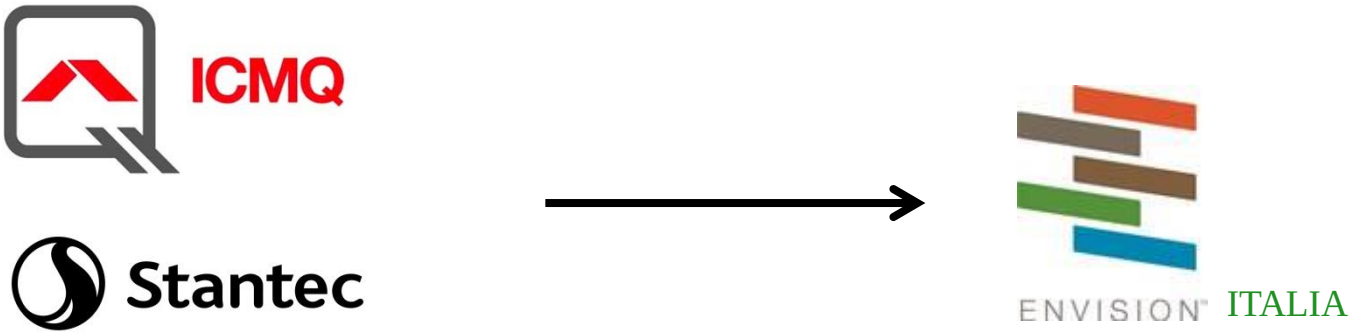
ZOFNASS PROGRAM FOR SUSTAINABLE INFRASTRUCTURE
Graduate School of Design Harvard University



Stantec ha collaborato con ISI alla stesura dei protocolli e delle procedure di Sistema. ICMQ è leader nella certificazione e nella validazione in Italia.
ICMQ e Stantec rappresentano ISI/Envision in Italia e operano come supporto a ISI/Envision sul suolo nazionale (Formazione e verifica).
Stantec e ICMQ non saranno coinvolte in attività consulenziali legate al protocollo.

ICMQ Stantec

ISI ed Envision® in Italia



Stantec ed ICMQ hanno un accordo con l'ISI per dare vita alla sezione italiana, che avrà i diritti esclusivi per la formazione e la qualificazione dei professionisti e la certificazione dei progetti con il marchio Envision – www.envisionitalia.it
Si unisce l'indipendenza e l'imparzialità di ICMQ nel gestire i processi certificativi con l'esperienza ingegneristica di Stantec. Envision™ Italia svolgerà solo valutazione di terza parte indipendente, lasciando al mercato e agli Envision™ SP il supporto ai progettisti e ai committenti.

FASE ATTUALE:

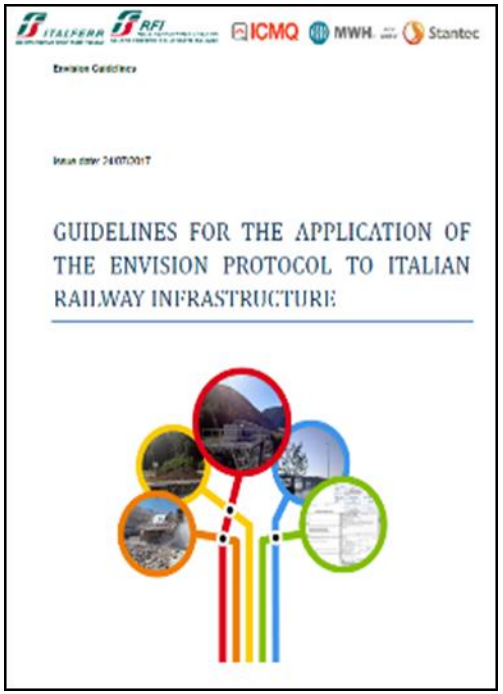
Una certificazione rilasciata per RFI. Registrazione per la certificazione di due progetti da Italferr e Trevi. In fase di sviluppo altri progetti da parte di clienti pubblici e privati.

ICMQ Stantec

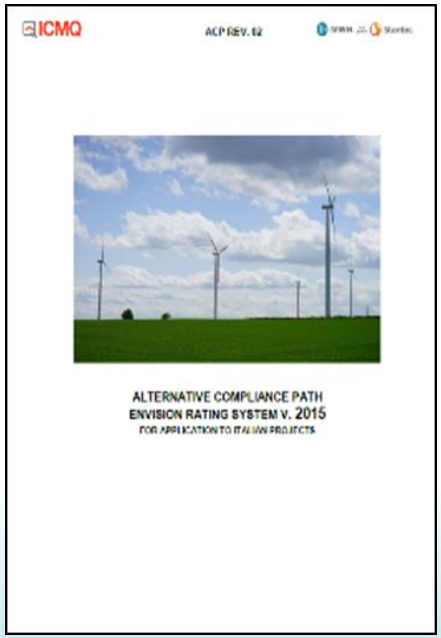
ICMQ e STANTEC in Italia

ICMQ e **Stantec** sono state incaricate da ISI di divulgare il sistema di rating Envision in Italia attraverso:

- Formazione e qualifica di ENV SPs (circa 130 dal 2016)
- Certificazione dei progetti in Italia
- Stesura di documentazione tecnica



Linee guida per l'applicazione del protocollo Envision alle infrastrutture ferroviarie italiane

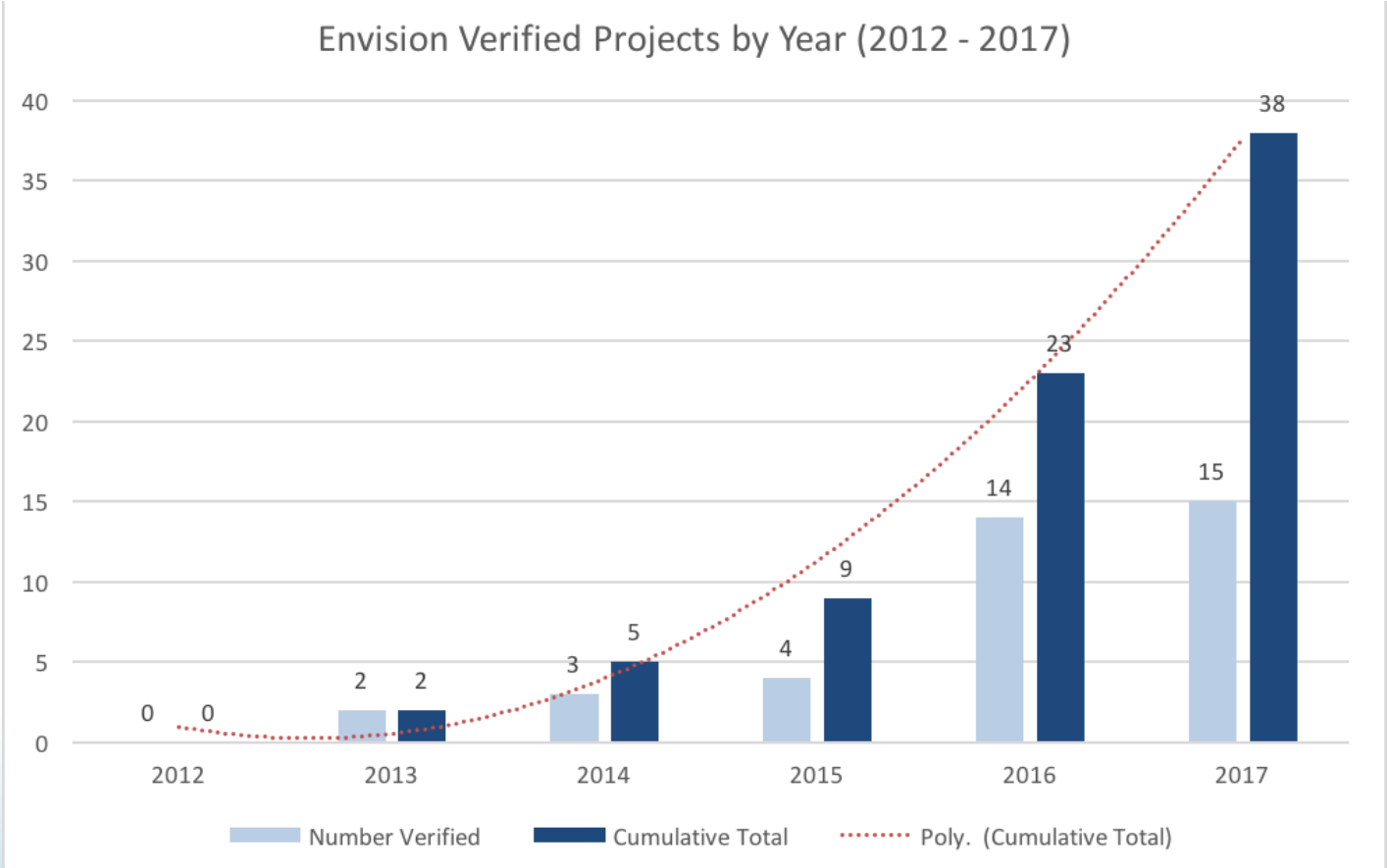


Alternative Compliance Path (ACP) : fornisce informazioni e soluzioni in relazione all'adattabilità e all'applicabilità dei crediti Envision alla realtà italiana.

ENVISION Passato e Presente

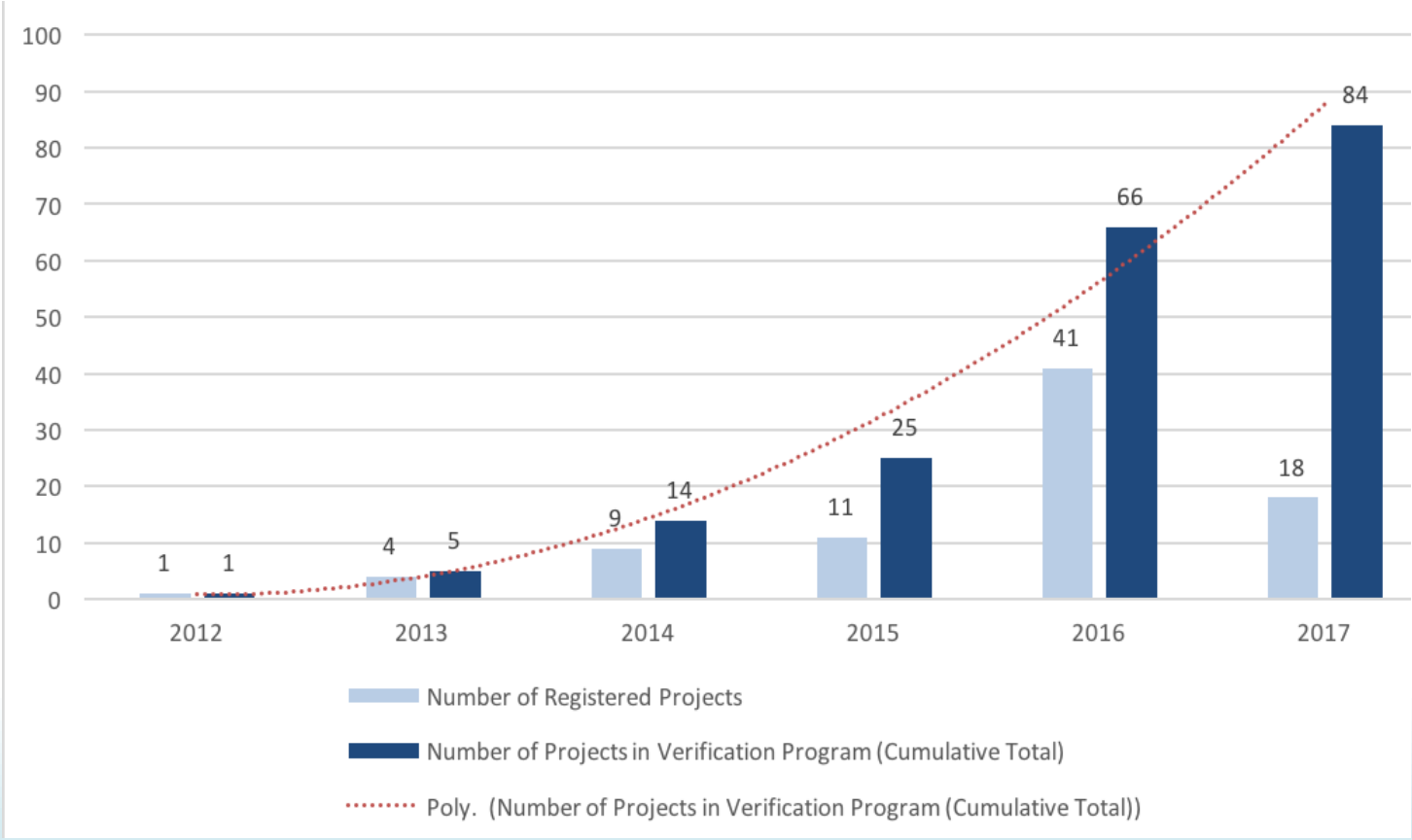
- **2011**
  - First member company
- **2012**
  - First Envision Sustainability Professional (ENV SP)
- **2013**
  - First Envision verified project
- **2017**
  - 273 corporate members, 41 city/agency members
  - 6,400 ENV SPs
  - 29 verified projects representing $10 billion
  - 8 projects actively in verification
  - 28 registered projects ($5 billion)

ENVISION Progetti verificati per anno

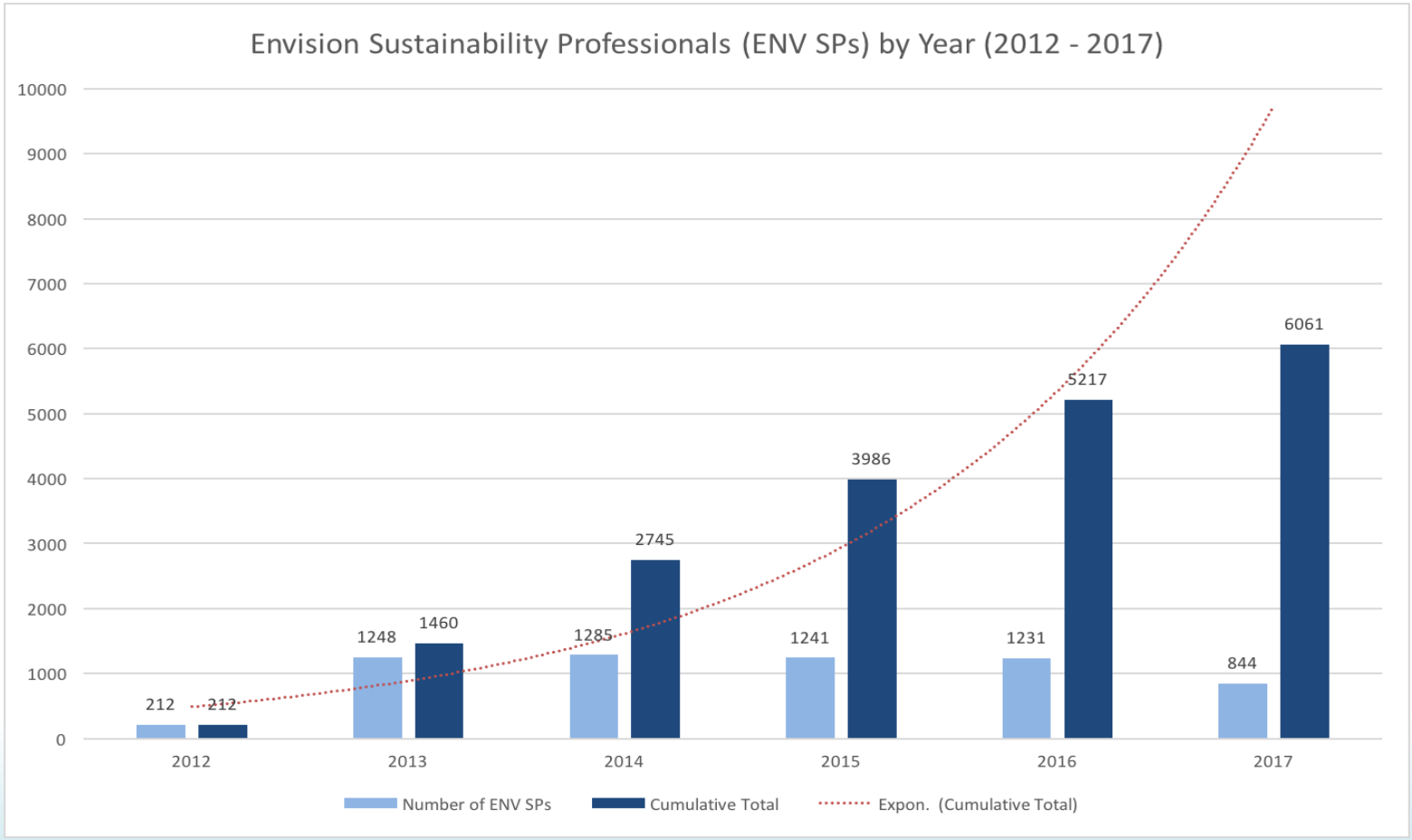


Numero di Progetti in Verifica

(2012 – 2017)

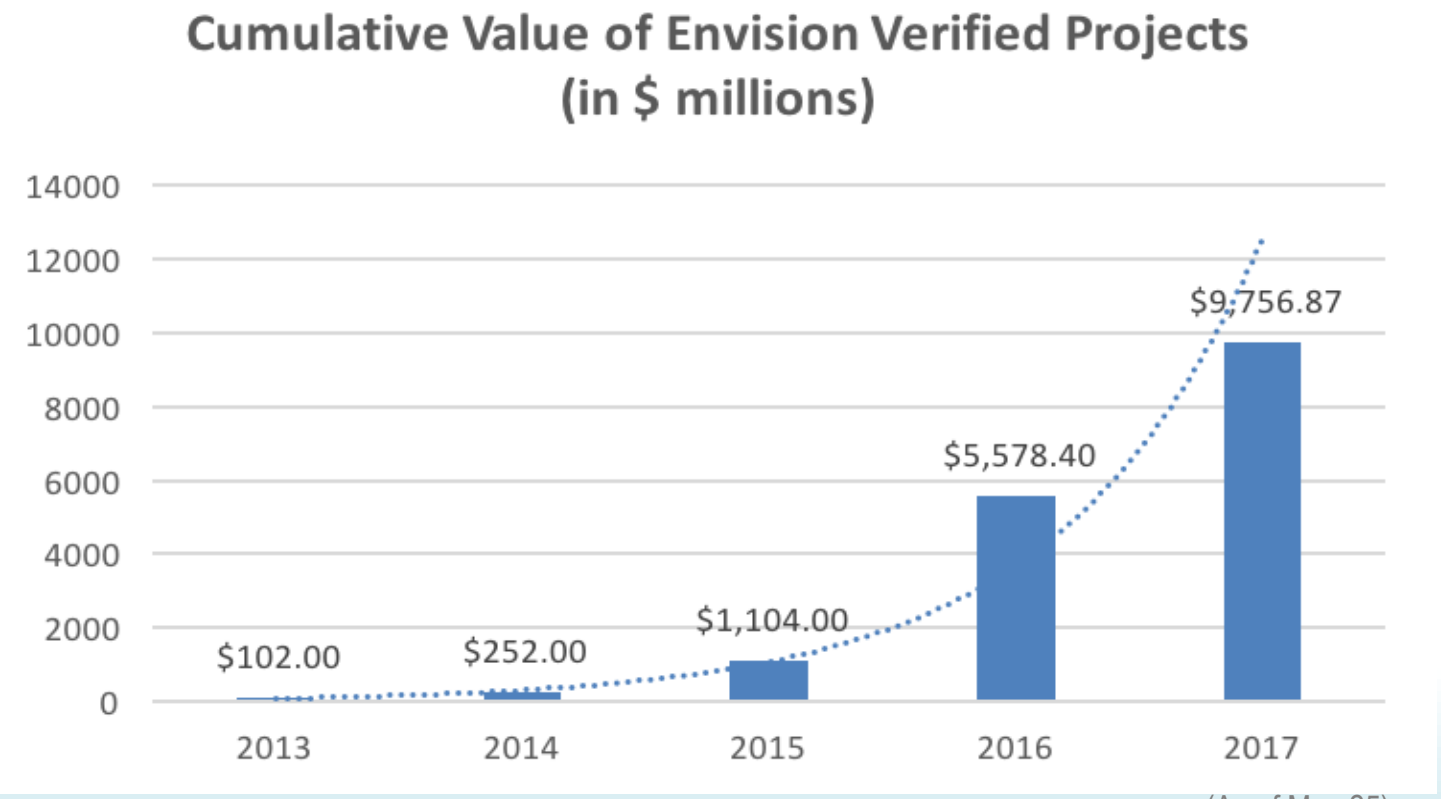


ENVISION Sustainability Professionals



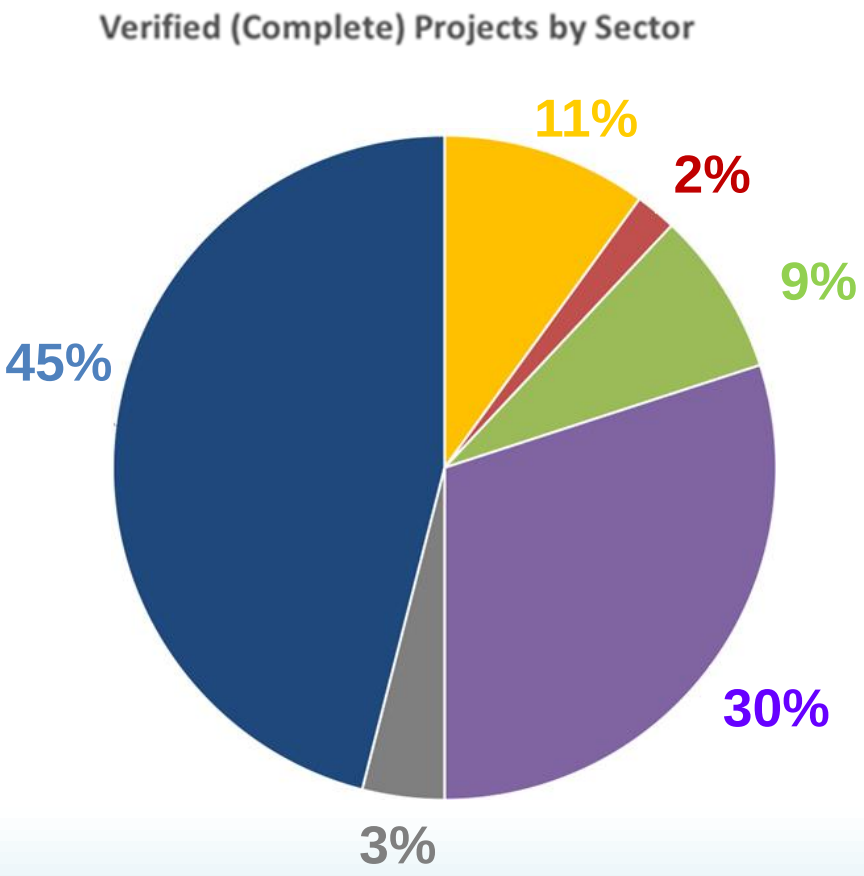
Verifica dei Progetti

(2003 – 2017)



(As of May 25)

Tipologie di progetti certificati



SETTORI:

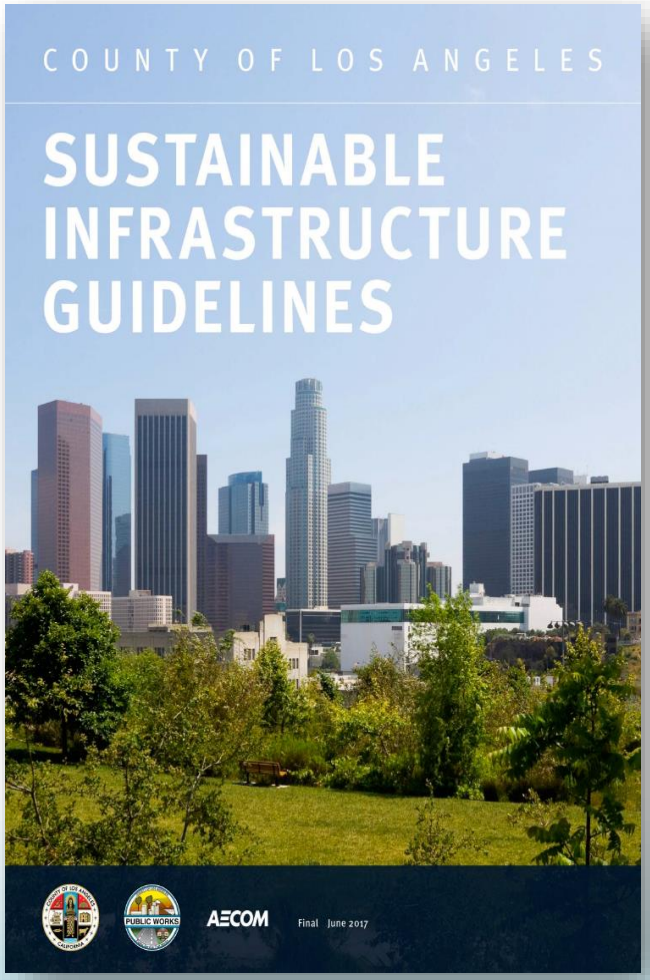
- Progetti idrici
- Progetti di trasporto
- Progetti energetici
- Progetti legati all'ambiente/paesaggio
- Progetti di trattamento rifiuti
- Progetti legati al settore alimentare

Top Governments Accounts by ENV SPs

- County of Los Angeles Department of Public Works (171)
- New York City Department of Design and Construction (115)
- Los Angeles County Metropolitan Transportation Authority (81)
- New York City Department of Environmental Protection (78)
- City of Los Angeles Bureau of Engineering (75)
- California Department of Water Resources (40)
- City of Kansas City, MO (38)
- Port Authority of New York & New Jersey (36)
- Miami-Dade County (30)
- MTA New York City Transit (24)
- King County Wastewater Treatment Division (24)
- City of Los Angeles (21)
- US Army Corps of Engineers (15)
- City of Houston (14)
- City of Santa Monica (18)
- Vancouver Fraser Port Authority (14)
- AlexRenew Enterprises (13)
- Pinellas County (12)
- City of Coral Gables (12)
- City of Los Angeles Bureau of Street Services (11)
- Madison Metropolitan Sewerage District (11)
- City of Santa Barbara (10)
- City of Roanoke, VA (9)
- City of Dallas (7)
- East Bay Municipal Utility District (7)
- Fairfax County Government (6)
- Holland Board of Public Works (5)

ICMQ Stantec

Sustainable Infrastructure Design Guidelines



- Integrative Design
- Site
- Water
- Energy Materials
- Climate Mitigation & Resilience
- Construction
- Operations and Maintenance

ICMQ

Stantec

ENVISION La prima certificazione in Europa

RFI
RETE FERROVIARIA ITALIANA
GRUPPO FERROVIE DELLO STATO ITALIANE

Linea ferroviaria Napoli – Bari

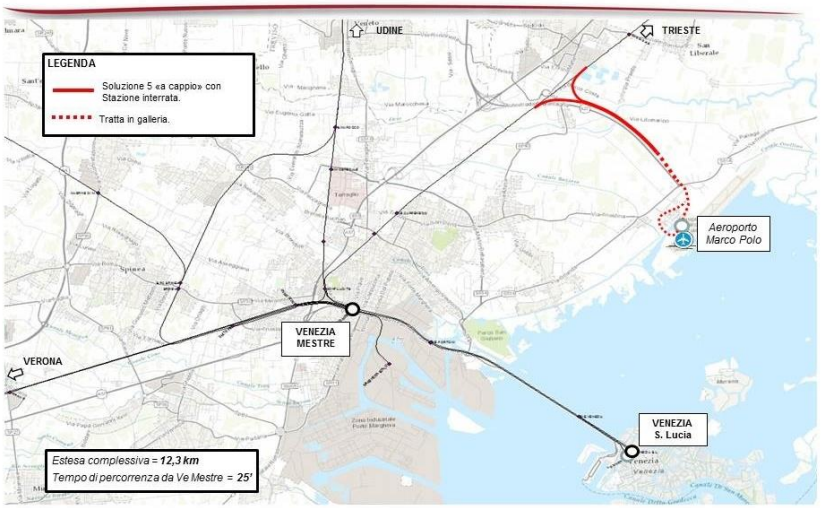
Rete Ferroviaria Italiana (Gruppo italiano FS) ha conseguito la certificazione Envision con il più alto livello raggiungibile (Platinum) per la sezione Frasso Telesino - San Lorenzo Maggiore che è parte integrante della nuova linea Napoli - Bari

ENVISION Progetti registrati in Italia

ITALFERR
GRUPPO FERROVIE DELLO STATO ITALIANE

TREVI

Collegamento ferroviario dell'Aeroporto Marco Polo di Venezia



LIFE MARINA PLUS

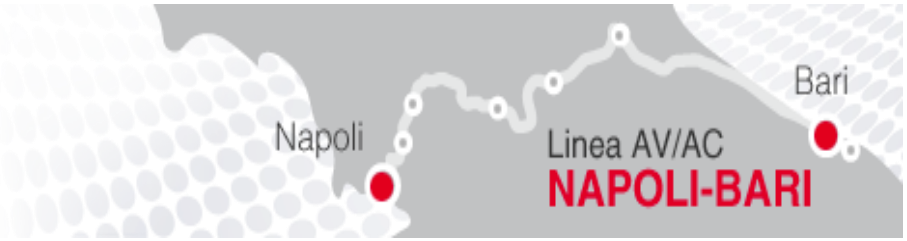
Una tecnologia affidabile e innovativa per la realizzazione di un piano di gestione sostenibile dei fondali marini e costieri

ENVISION Progetti registrati in Italia

ITALFERR
GRUPPO FERROVIE DELLO STATO ITALIANE

e2i energie speciali

Linea ferroviaria Napoli – Bari : tratto Apice Hirpinia



30 anni - 574 generatori eolici
1 TWh / a = 370.000 famiglie = 350.000 tonnellate di CO2

Impianto eolico di Vaglio

ENVISION Progetti in corso in Italia

Aeroporto di Venezia

Masterplan 2035

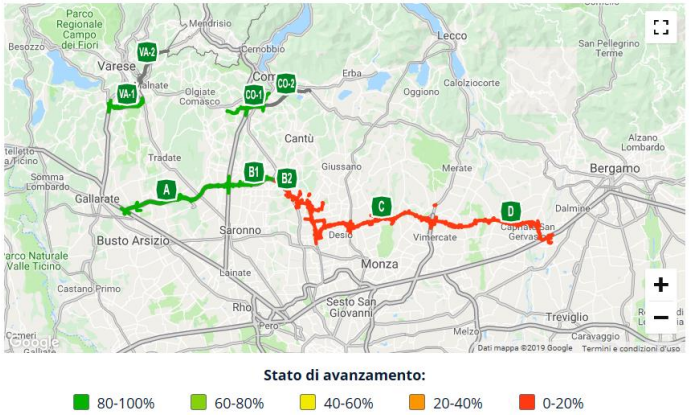
Attraverso Terna Rete Italia gestisce la rete nazionale con 72.900 km di linee ad alta tensione

Linee guida per l'applicazione del protocollo Envision alle linee elettriche di trasmissione

ENVISION Progetti in corso in Italia

milanoserravalle milanotangenziali

Progetto definitivo



Pedemontana Dalmine – Como – Varese – Valico del Gaggiolo

MM

Prolungamento Linea 5

Envision fee

FEE DI REGISTRAZIONE: → 2.000$

FEE DI CERTIFICAZIONE: → Dipendono dall'importo lavori e dal *Path* scelto

		Design +Post- Costruction (Path A)		Post-Costruction (Path B)	
Project Size (in M€)	Registration Fee	Certification Fees			
		Envision Italia Supporter	Envision Italia Non-Supporter	Envision Italia Supporter	Envision Italia Non-Supporter
< 2	€ 2,000	€ 5.000	€ 7.000	€ 4.000	€ 6.000
2 – 5	€ 2,000	€ 12.000	€ 14.000	€ 9.000	€ 11.000
5 – 25	€ 2,000	€ 17.000	€ 20.000	€ 14.000	€ 17.000
25 – 100	€ 2,000	€ 26.000	€ 30.000	€ 21.000	€ 25.000
100 – 250	€ 2,000	€ 33.000	€ 39.000	€ 28.000	€ 34.000
250 – 500	€ 2,000	€ 41.000	€ 48.000	€ 35.000	€ 42.000
500-1000	€ 2,000	€ 48.000	€ 56.000	€ 42.000	€ 50.000
> 1000	€ 2,000	ad hoc evaluation			

ENVISION Italia Supporter

Envision Italia Supporter	
Supporter	Quota annuale dal 2019
Singolo professionista	20€
Ministeri/PA/Comune/Regione/Provincia	0€
Università	0€
Aziende/Società /Organizzazioni	
< 50 impiegati	200€
50 – 100 impiegati	500€
100 – 500 impiegati	1.000€
> 500 impiegati	2.000€

- Community per dare credibilità alla progettazione infrastrutturale sostenibile
- Scaricare gratuitamente il Protocollo Envision
- Sconti sulla formazione e sulla certificazione

ENVISION Italia Supporter

ITALFERR
GRUPPO FERROVIE DELLO STATO ITALIANE

e2i energie speciali

enel Green Power

ZETA VU s.r.l
SOCIETÀ DI INGEGNERIA

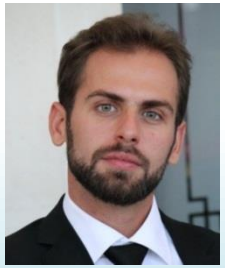
POLITECNICA
BUILDING FOR HUMANS

NET ENGINEERING

AMBIENTEITALIA
we know green

SAVE
GRUPPO SAVE

eambiente



0° greenwich
SUSTAINABILITY CONSULTING

Il sito Envision Italia www.envisionitalia.it

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