

Solar Stewardship Initiative

Quality and Sustainability Workshop | 2026



SOLAR
STEWARDSHIP
INITIATIVE

The SSI | BACKGROUND

WHAT IS THE SSI?

The SSI is a **solar-specific** value chain **assurance programme** co-founded by a broad coalition of industry stakeholders, to build a more sustainable, responsible solar future.

WHY THE SSI?

As solar energy becomes central to the global clean energy transition, the sector faces growing scrutiny over issues like labour and human rights, traceability in sourcing materials and environmental impacts in manufacturing and raw material extraction.



Compliance

- Retain **market access** and meet global and local **legislative requirements** (e.g., EU CSDDD, CSRD, US Uyghur Forced Labor Prevention Act).
- Access SSI **standards and tools** to align with ESG and traceability expectations.

Reputation

- Meet growing demand for **verified sustainable products**
- Drive **innovation** in sustainable practices and stay ahead of competitors.
- Membership of the SSI demonstrates **commitment to sustainability and transparency** in the solar value chain.

Collaboration

- **Engage** with key industry stakeholders
- **Participate** in shaping industry standards and sustainability goals.

The SSI | MEMBERS

MANUFACTURER MEMBERS

BUYER MEMBERS



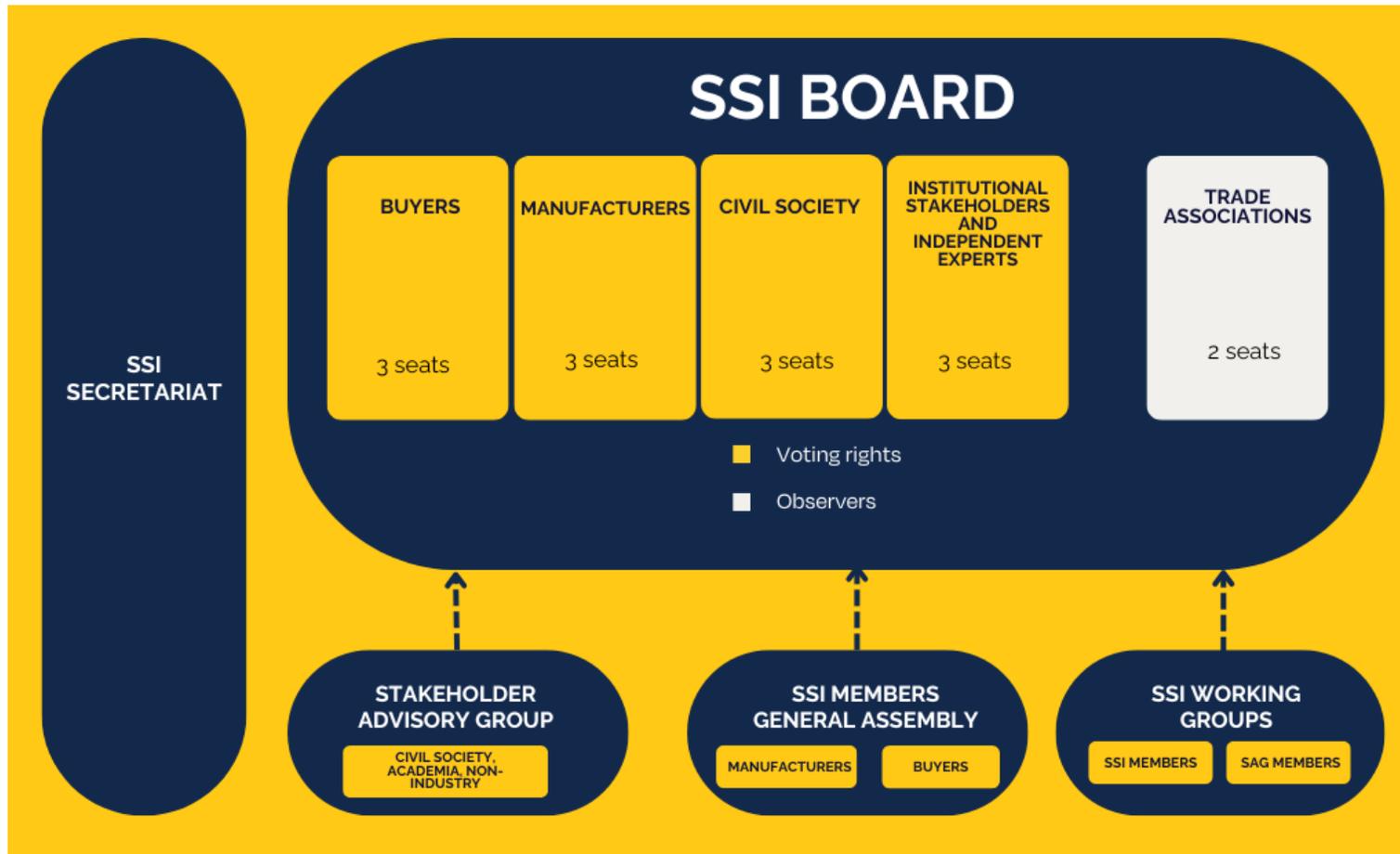
ASSOCIATION MEMBERS



SSI manufacturer members represent more than **60%** of global manufacturing cap



The SSI | GOVERNANCE



The SSI is strongly supported by a broad range of stakeholders and brings together **manufacturers, developers, installers, purchasers, human rights experts, civil society organisations** and **financial institutions** to foster responsible production, sourcing and stewardship of materials throughout the solar value chain.

GOVERNANCE | The SSI Board



Giulia Guidi



Luis Gómez-Chavarría



Michael Koebele



Stephan Singer



Susannah Wood



Michiel van Schalkwijk



Pia Alina Lange



Andrea Weiner



Maté Heisz



Gemma Grimes



Guido Agostinelli



Mehmet Bulut



Malin Oud



Haley St Dennis



Quality at scale

How to build supply chain credibility?



SOLAR
STEWARDSHIP
INITIATIVE

QUALITY AT SCALE | At a turning point

84.5 GW

EU annual solar PV market forecast by 2029 (Source: SPE)



797 GW

EU cumulative solar PV capacity by 2030 (Source: SPE)



2 billion people

Market covered by the free trade agreement signed January 2026



74GW

Solar manufacturing capacity in 2024 (Source: NSEFI)

100 GW

Installed solar capacity reached in Feb. 2025 (Source: NSEFI)

WHAT IS NEEDED

Solar is moving from **rapid growth** to **systemic infrastructure**. Scale now requires:

- diversified supply chains
- long-term manufacturing partners
- investor confidence

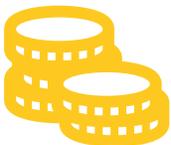
QUALITY AT SCALE | Why ESG and traceability matter for quality & sustainability?



OPERATIONAL & SUPPLY CHAIN RISKS: lack of visibility upstream increases the likelihood of disruptions, disputes, or sudden supplier exclusion.



REGULATORY RISKS: tightening forced-labour, due-diligence, and trade rules in the EU, UK, and elsewhere mean that weak transparency can translate directly into blocked imports or stranded assets.



REPUTATIONAL & FINANCIAL RISKS: allegations linked to labour, governance, or opaque sourcing can trigger financing withdrawal, higher cost of capital, or project delays. Investors therefore increasingly look for **credible assurance**, not self-declarations.

CONTEXT: Global regulatory trends – solar sector

- **Rapid policy shifts:** ESG and supply chain legislation is expanding globally — non-compliance risks market access and reputation.
 - **Focus on human rights & labour:**
 - **US:** Uyghur Forced Labor Prevention Act (UFLPA) blocks imports linked to forced labour.
 - **UK:** Modern Slavery Act and proposed tougher due diligence measures.
- **Environmental due diligence:**
 - **EU:** Corporate Sustainability Due Diligence Directive (CSDDD) and Forced Labour Ban will require proof of compliance across supply chains.
 - **Germany & France:** National due diligence laws already in force.
 - **Asia-Pacific momentum: Indonesia:** New regulations on renewable energy projects include local content requirements and growing expectations on ESG performance, including HRDD
 - **India:** Considering stronger supply chain due diligence measures, alongside mandatory ESG disclosure for large companies.
 - **China:** Green manufacturing standards and traceability efforts in response to export market requirements.
- **Trade & market access risks:** Shipments already delayed or blocked in US & EU due to insufficient traceability or forced labour concerns.
- **Investor & finance pressure:** IFIs (World Bank/IFC, ADB) now integrate ESG and human rights standards into project financing.
- **Global harmonisation & divergence:** While legislation shares common themes, regional variations increase compliance complexity for manufacturers and developers.

QUALITY AT SCALE | New expectations

With growing capacity, India's manufacturers are increasingly export-oriented. In the EU, UK, and US, market access is no longer driven by cost and performance alone, but by ESG risk, forced-labour regulation, and supply-chain transparency. **Quality must now be demonstrated across processes and sourcing — making credibility, traceability, and independent verification crucial.**

THE QUALITY EQUATION

Advanced technologies are entering production faster than ever. Testing and reliability remain essential, but buyers and investors increasingly ask “how do you know, and how do you prove it?”

Quality today = performance + transparency + consistency + credibility across sites and suppliers



QUALITY AT SCALE | From disclosure to enforcement: a use case

What Won't Protect You in Court	What Courts Actually Want to See
✗ Supplier Code of Conduct	✓ Purchasing term changes (dated)
✗ Annual audit reports	✓ Remediation budgets (funded)
✗ Policy documents	✓ Decision logs (halted orders)
✗ Risk assessment PowerPoints	✓ Worker engagement records

Policies won't save you in court. Proof will.

- On 14 January 2026, the UK High Court **ruled** that claims against Dyson relating to alleged human rights abuses in its global supply chain will proceed to a liability trial in England in **April 2027**.
- **Courts are no longer satisfied with high-level statements or code of conducts.**
- **EU Forced Labour regulation, Omnibus, UFLPA** – burden of proof increasingly falls to companies.

As due diligence shifts from reporting to enforcement, evidence-based assurance becomes essential for bankability.

Due diligence regulations

These regulations vary:

- Agnostic of geography and product *or* have a discrete material scope
- Cover the full spectrum of ESG issues *or* are topic-specific
- Require full supply chain visibility *or* not

SSI's standards comprehensively cover ESG and traceability topics in scope of the EU's due diligence and reporting obligations

Applicable regulations

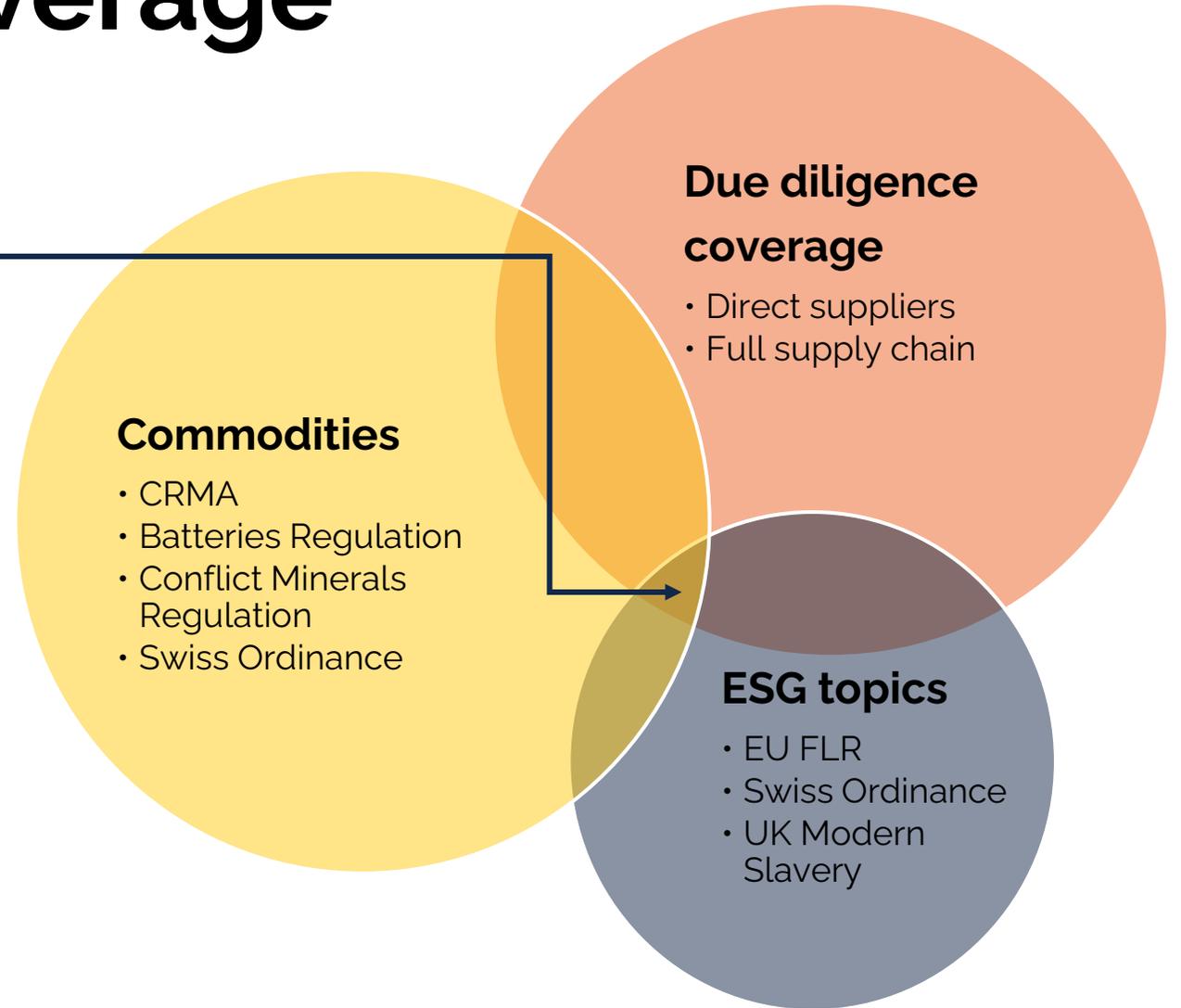
- EU Critical Raw Materials Act
- EU Corporate Sustainability Due Diligence Directive
- EU Corporate Sustainability Reporting Directive
- EU Taxonomy
- EU Forced Labor Regulation
- EU Batteries Regulation
- US Uyghur Forced Labor Protection Act
- French *Loi de vigilance*
- Norwegian Transparency Act
- EU Conflict Minerals Regulation
- Swiss Ordinance on Due Diligence and Transparency
- UK Modern Slavery Act

Due diligence coverage

SSI's standards together **maximise** coverage of these elements by including the full scope of ESG topics and the full supply chain for due diligence,

Global geographic scope aligns with the EU approach (vs. US UFLPA)

Operationalise the **OECD Due Diligence Guidance** with both human rights and environmental scope



Quality assurance beyond the product

The SSI certification & assurance system



SOLAR
STEWARDSHIP
INITIATIVE

BEYOND THE PRODUCT | Completing the assurance stack



Product certification ensures performance. Process assurance ensures consistency. With third-party audits site-level assessments, the SSI compliments the assurance stack.

The SSI | The Standards

1 ESG STANDARD

- Designed to evaluate a manufacturing site's performance in three key areas:
 - **Governance and Business Ethics**
 - **Environment**
 - **Human and labour rights**
- This Standard can certify a 'link' – i.e. a production site – in the solar supply chain

GOLD: No major or minor non-conformances (NCs)

SILVER: No major NCs, 5 or less minors. Improvement plan

BRONZE: No major NCs, 10 or less minors. Improvement plan

2 SUPPLY CHAIN TRACEABILITY STANDARD

- Published December 2024
- First certifications – late 2025
- This Standard is the first step to show precisely where the materials used at each link in the supply chain come from and how they can be traced.
- Covers the entire silicon value chain, from quartzite mining to photovoltaic module production.

GOLD: No major or minor non-conformances (NCs). Traceability to quartzite.

SILVER: No major NCs, 5 or less minors. Improvement plan. Traceability to MGS.

BRONZE: No major NCs, 10 or less minors. Improvement plan. Traceability to polysilicon.

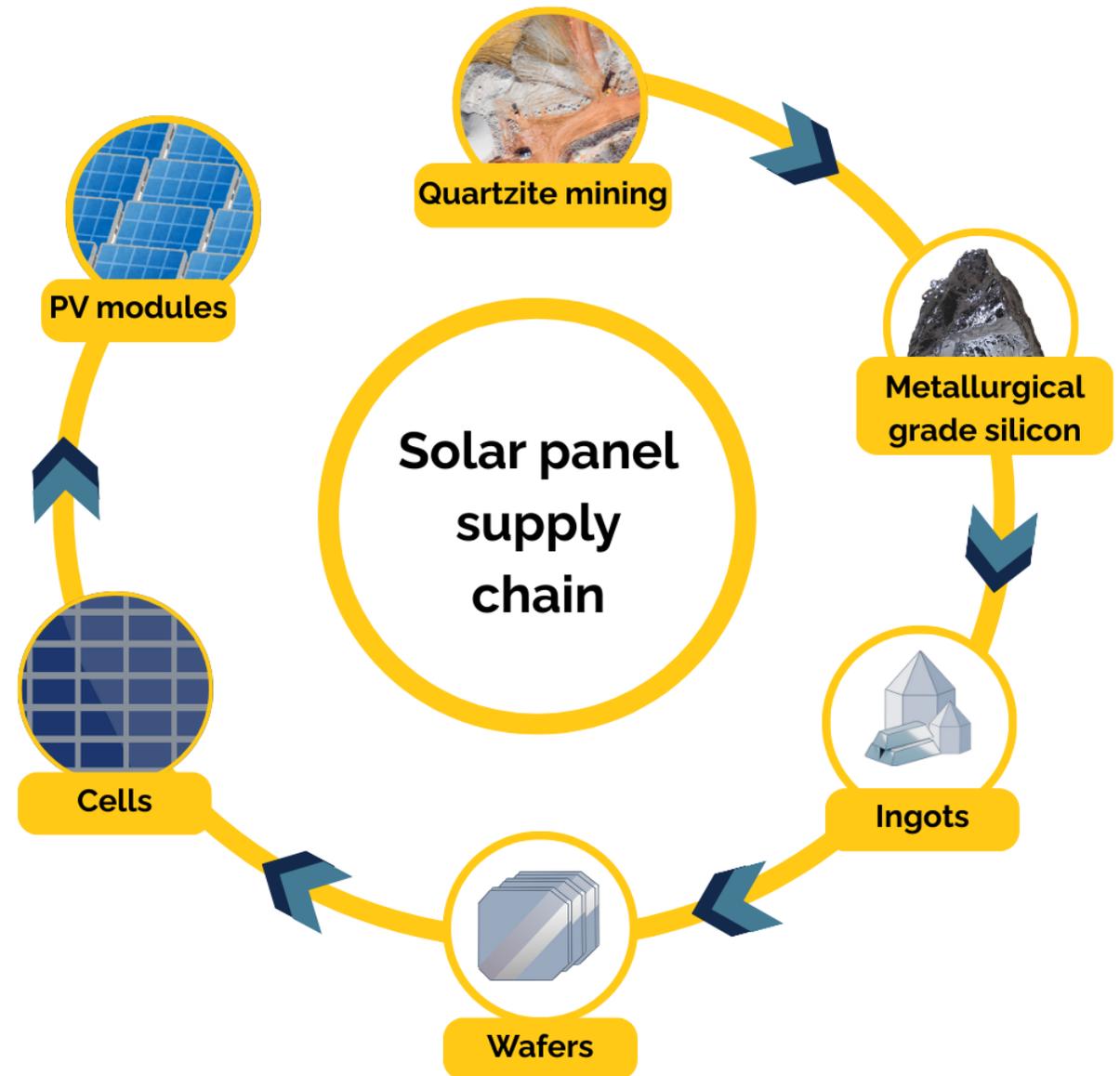


BEYOND THE PRODUCT Full supply chain coverage

The SSI Standards are designed to cover all types of solar production sites across the entire value chain.

This means that certification is available not only for module manufacturers but also for upstream suppliers such as **wafer** and **ingot** producers, **quartz mines**, and other raw material extraction sites.

By doing this step by step, we are building the foundations of where materials can be traced through **a credible unbroken Chain of Custody**, verified sites as they move downstream.



Assessment Process

Self-Assessment Questionnaire (SAQ)

- Once a member signs the SSI Principles, they receive a **SAQ to complete within 6 months.**
- The member must complete **one SAQ per each site and per each SSI Standard** and send it to the SSI.
- At least 2 member sites **must be assessed within 12 months of signing the SSI Principles** (new sites should be added in the following years).

Assessment Tender

- Approximately 3 months before the deadline for the assessment, **the SSI will issue a bidding process** amongst all SSI-approved Assessment Bodies (AB).
- The SSI will analyse all proposals and make a recommendation based on technical and commercial considerations.

Assessment

- Once the member accepts the AB recommended by SSI, **they must sign a direct contract.**
- Once there is a contract in place, pre assessment activities start. The onsite assessment follows. Finally, post assessment activities conclude the process.
- As a result, the AB will produce a report for **the SSI analysis and certification decision.**

Certification

- Taking into account the assessment report, **the SSI Secretariat will issue a certification decision.**
- The certification decision is communicated to the member and the AB.
- The SSI website is updated with the certificate and **Public Summary Report.**

The SSI | ASSESSORS & CONSULTANTS

CONSULTANTS

ASSESSMENT BODIES

TDi Sustainability

Enlight
Energy Services



ENERT/S
Applus®

intertek

CEA



SGS
When you need to be sure

actionsustainability

solkeys

SINO
VOLTAICS

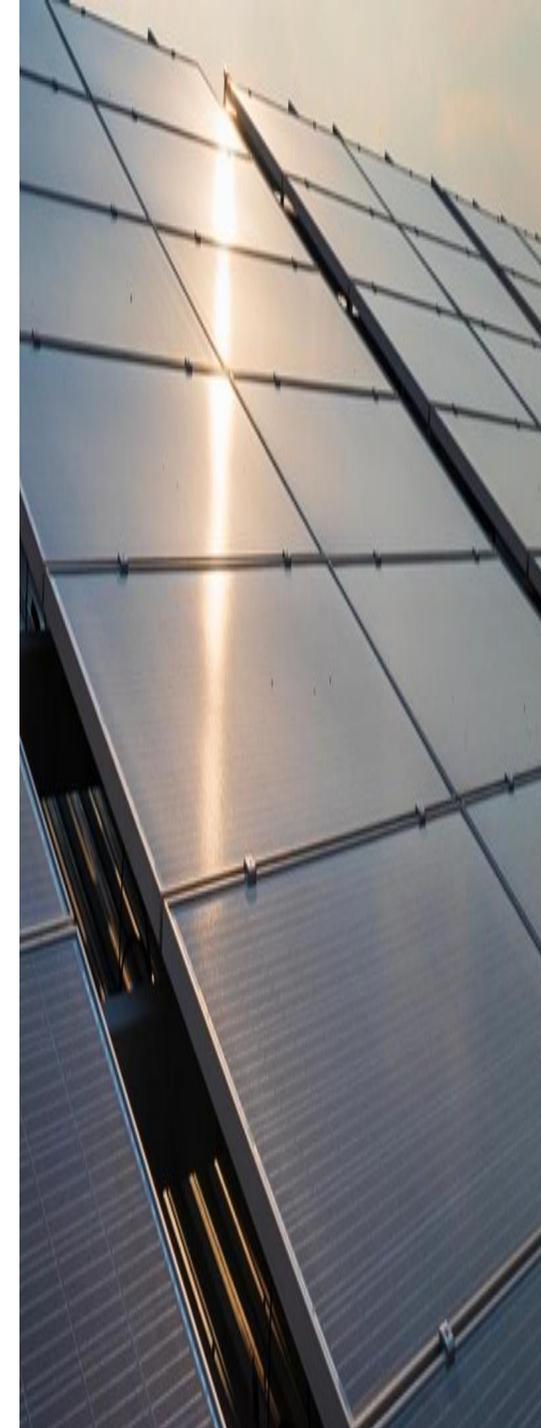


SUNZEST SOLAR

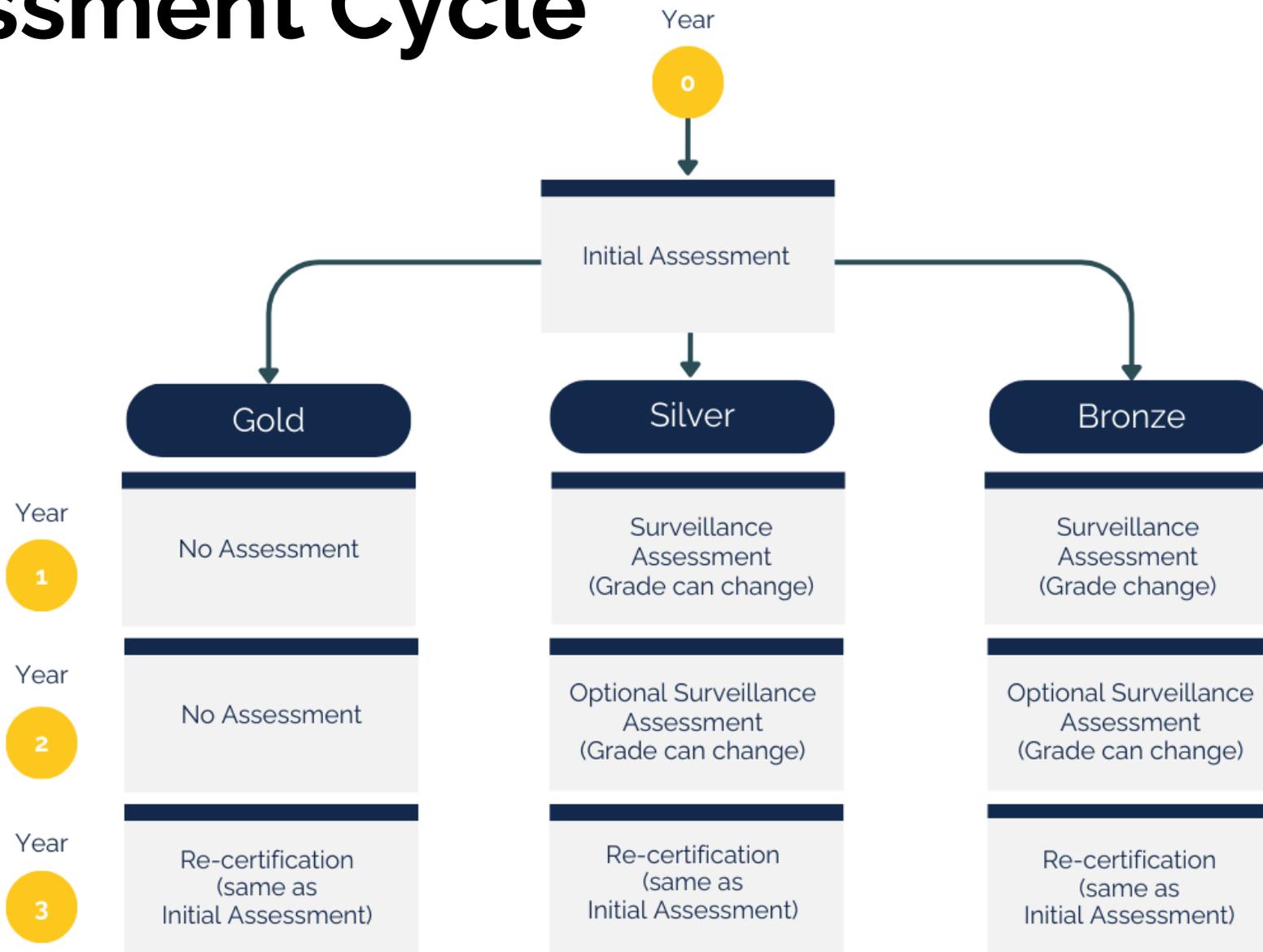
TÜVRheinland®
Precisely Right.

The SSI Secretariat maintains a list of consultants who can assist companies in preparing for the SSI assessment; this support is entirely optional. While these consultants have access to our training materials, the Secretariat does not officially endorse them.

The third-party audits are conducted exclusively by Assessment Bodies certified and regularly trained by the Secretariat. Only these authorised Assessment Bodies are permitted to carry out official assessments of SSI members.



Assessment Cycle



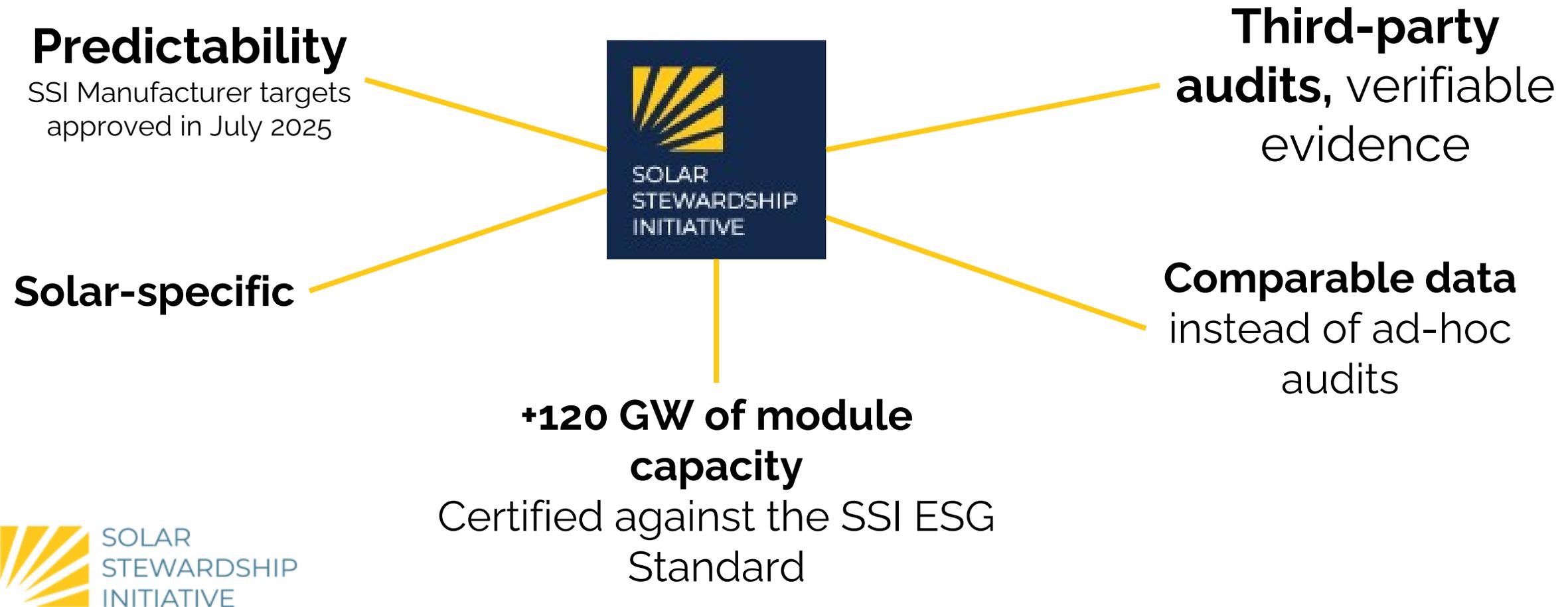
From assurance to access to finance

ESG and traceability as enablers



SOLAR
STEWARDSHIP
INITIATIVE

ASSURANCE TO FINANCEI Investing in credible solar with the SSI



ASSURANCE TO FINANCEI SSI Finance partners

The SSI is strongly supported by the international financial system, including leading international financial institutions.

The **European Investment Bank** and **Asian Development Bank** are part of the SSI Stakeholder Advisory Group, and the **International Finance Corporation (IFC)** is on the SSI Board. The **European Bank for Reconstruction and Development** has signaled its intention to endorse the SSI, recognising it as a practical tool to strengthen transparency and responsible production in solar supply chains



“The International Finance Corporation welcomes the Solar Stewardship Initiative. We commend the industry’s push to drive collective action on sustainability and we look forward to contributing to its development with other stakeholders

Guido Agostinelli
International Finance Corporation

”

ASSURANCE TO FINANCEI SSI

Governmental partners

April 2025 - Great British Energy acknowledges SSI as a tool to help fight forced labour in solar supply chains.



THANK YOU! | Contact us



Margaux Plurien

Global Membership & Commitments
Manager

Margauxp@solarstewardshipinitiative.org