



“Value” of Sustainable Schools – 16 April 2021

# Learning Objective for next 60 minutes



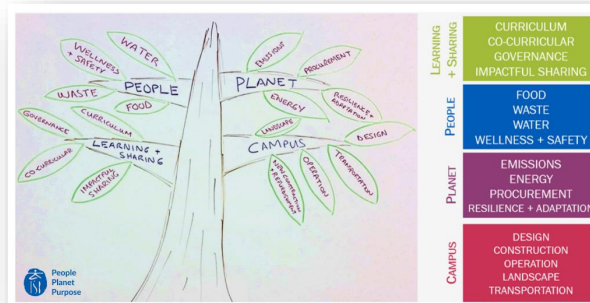
## Grow Knowledge

What makes a 'sustainable' or 'green' school



## Expand Awareness

Observe HOW AND WHY other schools are moving towards sustainability



## Apply Learning

Bring a sustainability lens to your school



**Boundary of Learning Objectives: school systems outside of the classroom**



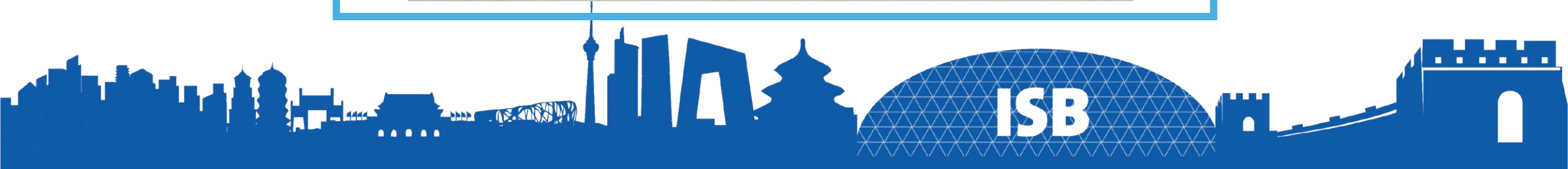
- NO STRAWS
- NO PLASTIC BOTTLES
- NO CUPS



# Baselining Activity

## 1 minute to Wonder

What makes a 'sustainable' or 'green' school?



# Our Story



## 2017 – Our Start

- How ISB was introduced to the concept?
- Why ISB said “Yes, let’s give this a try”?
- What added value did ISB hope to obtain?

## 2018-2019 – Planning

- The value of a multi-stakeholder group to develop a long-term plan?
- What was the learning curve like?
- The most surprising learning or take away from the planning process?

## 2020+ – Implementation

- What the added value is now compared to 2017
- What excites ISB most about this journey moving into the future
- Looking back, #1 biggest surprise / lesson learned?



# Our Process



**THE POSITIVE IMPACT**  
(per year)

- 60 MWH SAVED
- 60 Metric Tons of CO<sub>2</sub>e
- 29,000 RMB

Equal to Planting  
1,000 Trees!



## Baselining

- What practices does ISB have in place today?
- What are critical weaknesses?
- What are peers and higher education institutions doing?

## Roadmap & Action Plan

- The multi-stakeholder Working Group approach
- Materiality Assessment
- Answer “Where are we today?” and “Where do we aspire to be?”
- Document targets and commitments

## Implement and Share

- The real work starts now
- Assign responsibilities and overall lead
- Be ready when opportunity strikes
- Document progress and communicate





### Timeline Color Key

Student Groups	Food-related	Events	Facilities	Community
Student Club	Composting 1. R&S (with farm) 2. Student Club (bins) 3. Bio 1	Earth Day	Green Team established	Non-Profit Partnership
Roots & Shoots		Staff Wellness	Air Purification System	Non-Profit Partnership
Global Issues Group	Farming 1. Teacher (MS) 2. Chartwells (ES)	Club Project	Recycling Bins	Non-Profit Partnership
Impact Student Club		E-waste collection	8 <sup>th</sup> Grade Blue Paper Bin Recycling	Student Club Working with local / migrate kids
	Back-of-house Waste Tracking by Chartwells	External Speakers for Student Clubs	Reusable Mugs + Water Bottles	Non-Profit Fundraiser
	Nutrition Labels	Wellness Events	Foam Soap (Students)	English Language Learning for School Worker
	Aqua/Hydroponics (FA)		LED lighting conversions	
			Irrigation conversion	

**Original 2017 slide summarizing relevant past and present activities.**  
*Key finding: many disjointed efforts and sustainability champion(s) are too over-extended to deliver continuous value to students or school.*



# Our Process



## Baselining

- What practices does ISB have in place today?
- What are critical weaknesses?
- What are peers and higher education institutions doing?

## Roadmap & Action Plan

- The multi-stakeholder Working Group approach
- Materiality Assessment
- Answer “Where are we today?” and “Where do we aspire to be?”
- Document targets and commitments

## Implement and Share

- The real work starts now
- Assign responsibilities and overall lead
- Be ready when opportunity strikes
- Document progress and communicate



# Roadmap Timeline

## Process Overview

- Full Working Group
- Inform and Initial Material Issues Identification
- 30-45 minutes

## Materiality Assessment

- Working Group Core Members
- 1 – 2 hours
- (Community Engagement / Classrooms)

## Feedback and Team Creation

- Working Group Core Members
- Feedback from community, finalize assessment, create working group issue teams
- 1 – 2 hours

## Team Meetings

- Baseline issue, draft goals and strategies
- 30 – 1 hour every two weeks
- (Community Engagement / Classroom)

## Draft Roadmap Review

- Full Working Group
- Engagement feedback, review draft Roadmap
- 1 – 2 hours
- (Community Engagement / Classroom)

## Roadmap Approval

- Working Group Core Members
- Final review of roadmap
- 1 hour

August

Sept / Oct

October

Nov – Feb

March

May





# Multi-stakeholder Working Group

2 students; 2 parents; 3 faculty, 2 partners, 2 outside organizations, 11 school leadership



# Frameworks to Identify Relevant Topics

- Sustainability Tracking, Assessment & Rating System™ (STARS) for Universities and Colleges
- Green School Alliance's Protostars Metrics
- EcoSchool
- USGBC LEED
- Custom Roadmaps (i.e. Harvard)



## OUR ROADMAP

### EMISSIONS AND ENERGY

- GREENHOUSE GAS EMISSIONS
- ENERGY REDUCTION
- RENEWABLE ENERGY

### CAMPUS OPERATIONS

- NEW CONSTRUCTION
- BUILDING OPERATIONS
- TRANSPORTATION
- CLIMATE PREPAREDNESS AND CAMPUS RESILIENCE
- PROCUREMENT

### NATURE AND ECOSYSTEMS

- LANDSCAPE OPERATIONS
- CAMPUS DESIGN
- CONSERVATION AND EDUCATION

### HEALTH AND WELL-BEING

- PERSONAL WELL-BEING
- FOOD

### CULTURE AND LEARNING

- RESEARCH AND TEACHING
- GOVERNANCE
- EXTERNAL PARTNERSHIPS
- COMMUNICATIONS
- COMMUNITY ACTION



# Harvard's Material Topics



# Level of Evaluation of Each Topic

Design	Landscape	Construction	Operation	Transportation
Green / Open Space	Integrated Pest Management	Green Rating System	Green Rating System	Bus / Taxi Fleet
Rainwater Management	Equipment	Construction Standards	Indoor Air Quality	Employee Commuting
Heat Island Reduction	Biodiversity	Energy Modeling	Materials	School Travel
Light Pollution Reduction	Landscape Management	Acoustic Performance	Natural Light	Zero Emission Influence
Biophilia	Functionality	Construction Pollution Prevention	Construction and Demolition Waste	
			Durable Good Maintenance	
			Recommissioning	



# Evaluation Scheme

**Gap** – Insufficient Data to evaluate

**Beginning** – Unaware to aware of issue, but not implementing

**Approaching** – Aware of issue, inconsistent implementation

**Meeting** – Consistent achievement of best practices

**Mastering** – Leadership position, superior positive impact to people/planet



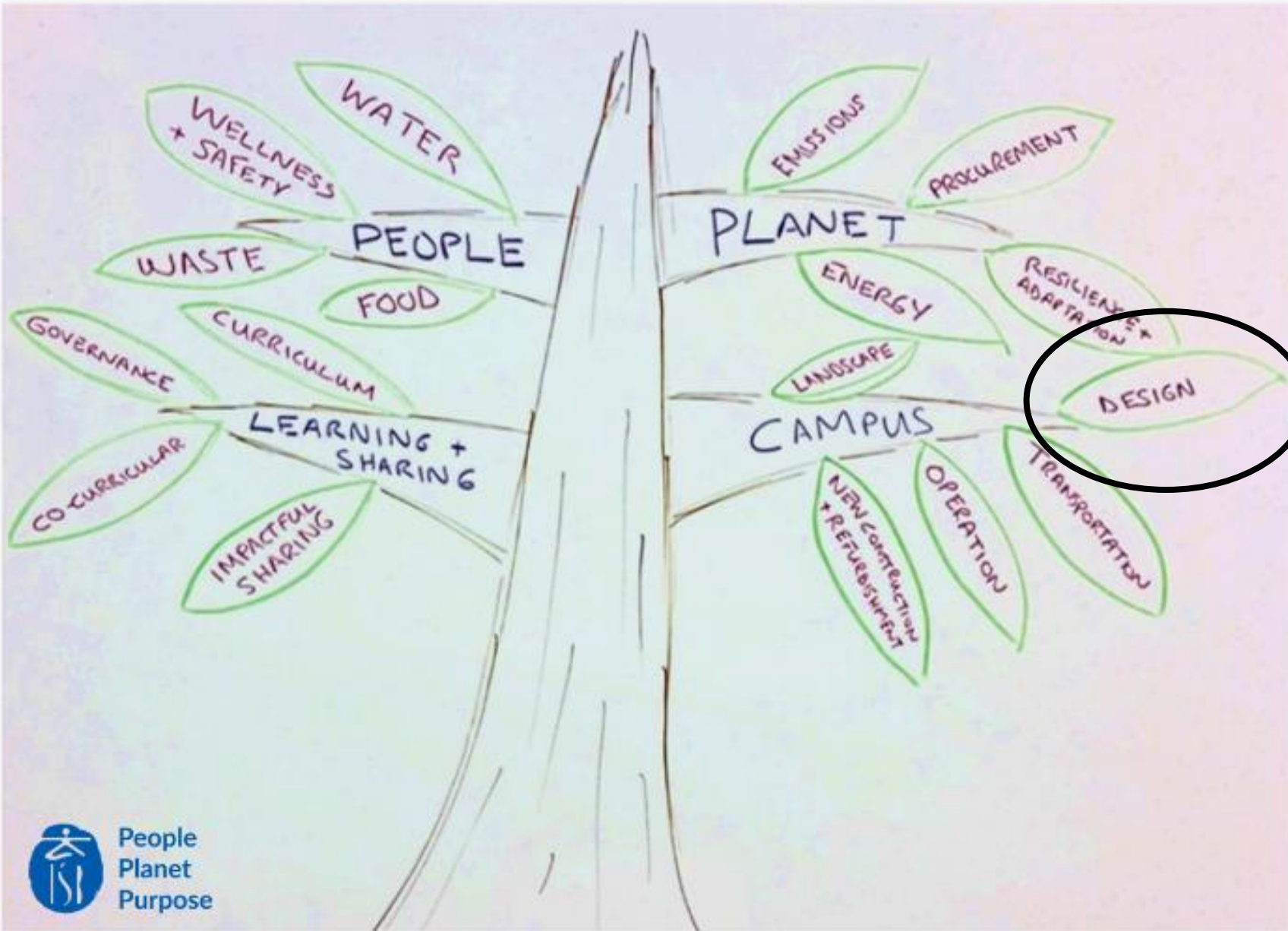
# Aspiration Level

To be the an increasingly sustainable organization with the understanding that our actions must align with the best interest of our students (i.e. we will not do “green” just for self-promotion).

*“It is ISB’s obligation to our students and those that will follow to dream big”*

(Also consider feasibility within China for a 2025 to 2030 time scale)





LEARNING + SHARING

CURRICULUM  
CO-CURRICULAR  
GOVERNANCE  
IMPACTFUL SHARING

PEOPLE

FOOD  
WASTE  
WATER  
WELLNESS + SAFETY

PLANET

EMISSIONS  
ENERGY  
PROCUREMENT  
RESILIENCE + ADAPTATION

CAMPUS

DESIGN  
CONSTRUCTION  
OPERATION  
LANDSCAPE  
TRANSPORTATION

DESIGN	ISB Examples of Best Practice	Peers	BEST PRACTICE	LEADERSHIP
<b>Green / Open Space</b>	Tiananmen Square, OEL, Fields	WAB's Lake	Provide outdoor space greater than 30% of total site area (of which 25% must be vegetated with turf grass not counting); Minimize Parking Area	Accessible rooftop gardens; continuous canopy
<b>Rainwater Management</b>	Direct to combined storm drain / sewer	None	Replicate natural hydrologic process to manage rainfall for 95 <sup>th</sup> percentile event; minimize impervious pavement	Rainwater collection and reuse
<b>Heat Island Reduction</b>	Black Roof, Pavement	None	White Roofs, plant shading, light colored pavers	Photovoltaics; open grid pavers; Green roof
<b>Light Pollution Reduction</b>	Soccer Field Lights Shielded; Track Lights Not Shielded; Dome	None	Meet Backlight-uplight-glare rating (i.e. minimize light emitted above horizontal plane)	Same
<b>Biophilia</b>	Potted Plants	CIS, DSB Green Wall	Potted plants, more natural light; examples of nature's patterns within building; use colors seen in nature	25% of project site landscaped ground / green roof; Indoor Green Walls, Water features for every 10000 m2; natural material finishes (wood, cork); plants covering 1% of floor area





**DESIGN**

**Baseline**      **Aspiration**

	Baseline		Aspiration	
	Begin	Approach	Meet	Master
Green / Open Space	Grey	White	Blue	White
Rainwater Management	Grey	Blue	Blue	White
Heat Island Reduction	Grey	Blue	White	White
Light Pollution Reduction	White	Grey	Blue	Blue
Biophilia	Grey	Grey	Blue	White



# Campus: Design



## Baseline

ISB is *beginning* its path towards increased awareness and knowledge related to sustainable design practices such as biophilia design, green spaces, and low impact design. Many of these design practices are known to result in beneficial impacts to student and staff learning and wellbeing.



## Target / Goal

None



## Standards

None



## Commitments to

- ❖ Responsible campus design that minimizes negative impacts on the local community.
- ❖ Enhance student and staff wellbeing and productivity through incorporation of biophilia\* into campus design and subsequent ISB strategic planning processes.

*\* **Biophilia** refers to the inherent need to experience and love nature. In terms of building design this means to increase occupant connectivity to the natural environment directly via plants, green walls, waterfalls or indirectly via natural colors and shapes. ISB's new facade is an example of biophilia with the wood paneling and natural color highlights. This type of design has been shown to improve student and employee performance and well-being.*



# Our Process



## Baselining

- What process and practices does ISB have in place today?
- What are critical weaknesses?
- What are peers and higher education institutions doing?

## Roadmap & Action Plan

- The multi-stakeholder Working Group approach
- Materiality Assessment
- Answering “Where are we today?” and “Where do we want to be in 5 years?”
- Documenting targets and commitments

## Implement and Share

- The real work starts now
- Assign responsibilities and overall lead
- Be ready when opportunity strikes
- Document progress and communicate



# Why Sustainability is Worth the Time

## For Your School

### Cost Savings

ISB reduced energy + water spend by 2.6 million RMB in 2020 (26% reduction year-on-year).

### Learning Opportunities

School systems and campus/facilities are well suited for applied learning.

Ex. ISB's Electric Bus, Recycling, HVAC Energy Efficiency

## For Your Professional Impact

### Proactive Role Expansion

Thinking with a sustainability perspective may open doors to new opportunities.

### Student Engagement Opportunities

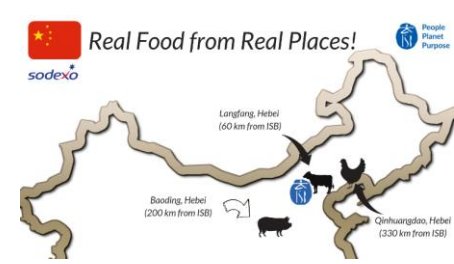
Become a more integral part of student learning. Whatever your role, there is something about it that students will be passionate to improve.

*Our schools and students must be upskilled to be ready for the changing world.  
Pressure is ramping up on governments and corporations to act now on climate, diversity, etc.*



# Examples of Value

## USGBC Announces 2020 Green Apple Day of Service Awards, Elevates Sustainability Leaders From Across the World



## Foreword for our 2019 Sustainability Impact Report

Here's what Sustainable ISB meant to Louisa Song, a 2019 ISB graduate:

"I feel proud to be a part of a community where sustainability is a priority. To value sustainability is to place the needs of future generations above those of the present, and with the state of the world today, it is clear that this is easier said than done. In that regard, I applaud ISB for not only outlining the necessary steps to become a more sustainable school through its roadmap but also keeping itself accountable by turning these plans into actions and reporting progress.

"Above all, I am most grateful for ISB's determination to engage the entire school community in its sustainability journey. During my Senior year, I was invited to join a working group of several community stakeholders that convened to bring diverse perspectives to the ISB Sustainability Roadmap 2025. That experience allowed me to develop my confidence and voice, two factors that have been integral to my growth as a person.



# Secrets for Success

## A Dedicated Resource

Continuity is a key component to a successful sustainability program. Schools have traditionally struggled with continuity as Eco-councils and Green Teams are great to voice ideas and gather input, but poorly suited to manage a program that extends across all functions of the school.

A dedicated resource – even as a part-time role – provides the stability needed to maintain and build upon projects and processes.

Example schools with Dedicated Resources include ISB and Dulwich.

## School Specific Framework

Think of sustainability as a very big umbrella and each raindrop is a topic of concern like climate, human rights, or gender equality. Some of those raindrops are not a priority for your school and thus you should reduce the size of your umbrella to prioritize your resources.

Using a school specific issue framework, such as those identified by ISB, rather than a generic or different industry framework, is key to successfully prioritizing what issues to focus on.



# Applied Learning Activity

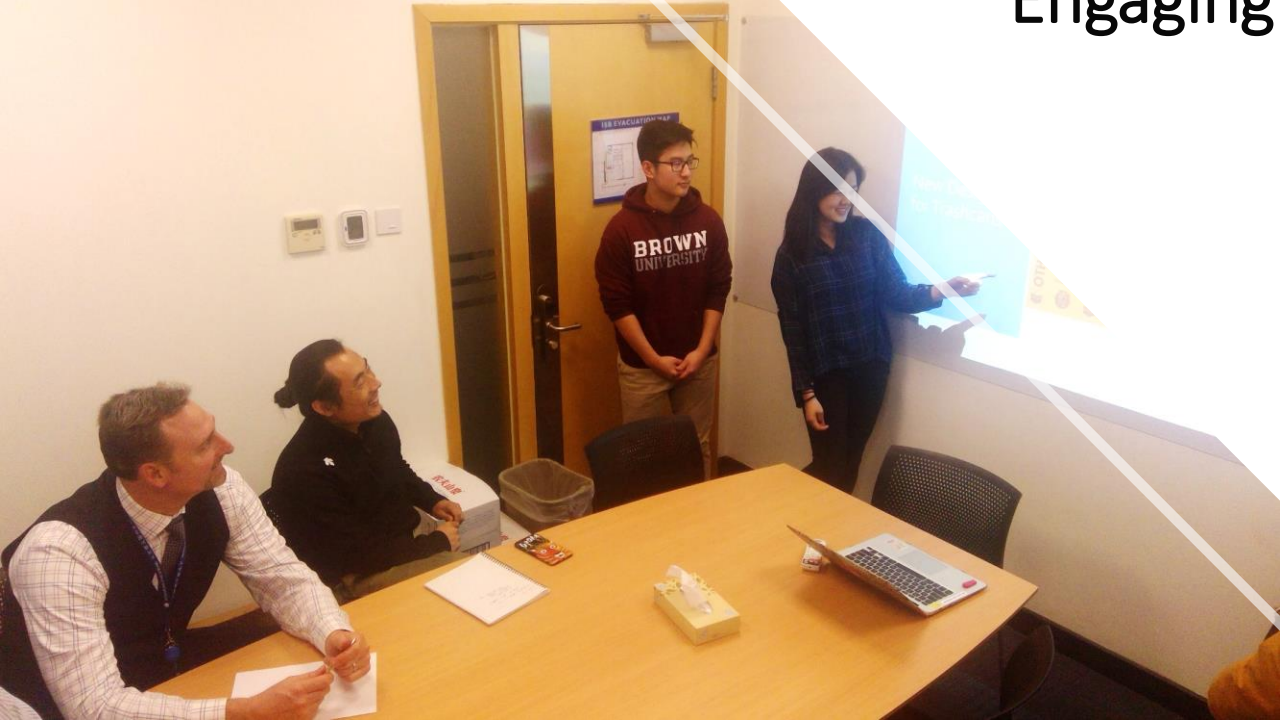
## 10 Minute Think and Share

- Individually (5 Min) – Think about how you could include sustainability in your role at your school. In what ways could you engage students and/or support your school’s development of responsible global citizenship.
- At your table (5 Min)  
Share your thoughts and ideas.





# Engaging Students







# Wrap and Take Away

## Grow Knowledge

Visit [Sustainable ISB](#) for greater background



## Expand Awareness

Others to Benchmark

- [American School of Dubai](#)
- [Dulwich College](#)
- [Munich International School](#)

## Apply Learning

Resources

- [ISB 2025 Sustainability Roadmap](#)
- [ISB Sustainability Action Plan](#)
- [ISB 2019 Sustainability Impact Report](#)
- [Compass Education Sustainability Self-Assessment Tool w/supplemental guidance](#)

*Help us amplify the positive impact by applying this new perspective to your role*



# We outline our process

[ABOUT](#)[ADMISSIONS](#)[LEARNING](#)[CO-CURRICULAR](#)[COMMUNITY](#)[NEWS & MEDIA](#)[EMPLOYMENT](#)

## OUR PROCESS

Our approach towards developing ISB's first Sustainability Roadmap was to bring together all parts of the school to provide a diverse set of perspectives. To this end, a Sustainability Working Group of 25 stakeholders including students, staff, parents, leadership, major partners, and external experts was assembled to represent the ISB community. At key stages within the Roadmap's development, feedback processes were opened up to the entire community with the findings fed back to the Sustainability Working Group to support their work.

Our desire with this process was to create a document that represents the ambitions of the entire community, one that everyone will be committed in making a success.

- ✓ Step 1 - Form Sustainability Working Group and develop list of topics ("leaves") that are relevant and important to ISB.
- ✓ Step 2 - Community engagement period on the relevance and importance of the selected 17 leaves.
- ✓ Step 3 - Branch Team breakouts (Learning and Sharing, People, Planet, Campus).
- ✓ Step 4 - Community engagement of the draft Roadmap.
- ✓ Step 5 - Finalize the Roadmap utilizing community feedback.



# List all our targets and commitments

## Targets, Standards & Commitments

Learning & Sharing

People

Planet

Campus

People are our foundation, they make us who we are. We will strive to enhance the health, productivity, and quality of life of each of our community members; students, staff, parents, and partners alike.

### Food

**STANDARD** | Develop Sustainable + Healthful Food Standard (w/consideration towards nutrition, labeling, sourcing, and impact) by 2020.

**COMMITMENT TO** | Education and empower the ISB community to make sustainable food choices and form healthy eating habits.

**COMMITMENT TO** | Promote drinking water on campus to support healthy choices and hydration.

### Waste

**TARGET** | Reduce waste per student by 60% by 2025 from a 2017 baseline. Where waste is defined as 'no longer wanted materials leaving the campus not managed by one of the 5Rs'.



# Publish an annual impact report

## IMPLEMENTING & IMPACTFUL SHARING

ISB's sustainability program is overseen by our Head of School and Chief Financial/Operating Officer with develop and implementation of the program, including strategy and initiatives, being the responsibility of Sustainability Manager. Students and staff voice will continue to be an integral part of the program's implementation via the Net Impact ISB student club and staff Green Team.

The Sustainability Manager works in close collaboration with departments throughout the school that oversee specific operational or administrative areas to reach the targets/goals, standards, and



# Our Action Plan

## ENERGY



### PLANET ACTION PLAN

#### Goals

Achieve an ENERGY STAR building score of *[score and achievement year to be determined by 2020]*.

Timeline	Strategy	Who's Responsible
Fall 2020	Identify ENERGY STAR Target via scenarios from long-term energy plan	Sustainability Manager
2020 - 2025	Track project execution against long-term plan and resulting progress towards ENERGY STAR	Facilities Director Sustainability Manager

#### Commitment to

Assess energy use by building and space type to inform ENERGY STAR goal setting by 2020.

Timeline	Strategy	Who's Responsible
Spring 2020	Conduct an Energy Audit	Facilities Director
Fall 2020	Develop long-term energy project plan	Facilities Director



# Sharing our progress and learnings in our Impact Report

## IMPACTFUL SHARING LEARNING + SHARING

### Commitment to

Transparent and open sharing of ISB's progress to this Roadmap via ISB's public website on an annual basis starting in 2019.

### Commitment to

Communicate ISB's 'People, Planet, Purpose' sustainability story to educate, engage, and motivate the ISB community.

### Commitment to

Recognize individuals providing significant contributions to ISB's sustainability accomplishments.

### Commitment to

Cultivate external partnerships within the wider community, that help inform ISB's efforts and amplify our local and global impact.



BEGINNING	APPROACHING	MEETING	MASTERING
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

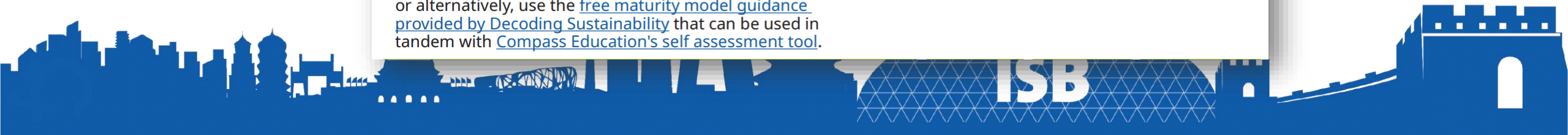
## CASE STUDY: ELECTRIC BUSES CAMPUS

In 2017, three students created a plan to lower the impact of the buses they rode each day. By 2018, the International School of Beijing (ISB) had added two electric buses to learn more about their operation. In the fall of 2019, ISB added 25 more zero-pollution electric buses, representing half of our fleet.

## TAKE HOMES FOR OUR PEERS AROUND THE WORLD

The International School of Beijing (ISB) challenges our APAC and EARCOS peers to rise to the greatest challenges of our lifetime - as outlined by the UN Sustainable Development Goals. Here are a few major action you can take home to your school to begin or further your own journey.

	EFFORT	COST	IMPACT	STUDENT OPPORTUNITIES
<b>Create a Strategy or Roadmap</b> How to get started? Look at example fram eworks such as ISB's, Harvard's, and Compass Education. If you do not have someone on staff with sufficient experience, you may need to look for external support or alternatively, use the <a href="#">free maturity model guidance provided by Decoding Sustainability</a> that can be used in tandem with <a href="#">Compass Education's self assessment tool</a> .	+++++	+ TO +++	+ (directly) +++++ (indirectly)	+++



Did you notice? We included past e-boards at the corner of each slide for additional inspiration!



WHEN: Monday, 23 April

HOW: Wear a **Blue**, **Green** or **Brown** colored Shirt to Support ISB Earth Day

FOOD with PURPOSE: Enjoy Ice Cream that supports rainforest ecosystems by using 100% **Certified Sustainable Palm Oil**



# Wrap and Take Away

## Grow Knowledge

Visit [Sustainable ISB](#) for greater background



The screenshot shows the 'Sustainable ISB' website page. It features a navigation menu with links for ABOUT, ADMISSIONS, LEARNING, CO-CURRICULAR, COMMUNITY, EMPLOYMENT, and NEWS & MEDIA. The main heading is 'SUSTAINABLE ISB'. Below the heading, there is a paragraph about the Sustainability Roadmap 2025, followed by a quote from a man in a blue suit and a small photo of him.

## Expand Awareness

Others to Benchmark

- [American School of Dubai](#)
- [Dulwich College](#)
- [Munich International School](#)

## Apply Learning

Resources

- [ISB 2025 Sustainability Roadmap](#)
- [ISB Sustainability Action Plan](#)
- [ISB 2019 Sustainability Impact Report](#)
- [Compass Education Sustainability Self-Assessment Tool w/supplemental guidance](#)

*Help us amplify the positive impact by applying this new perspective to your role*



**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**

# STUDENT DRIVE THE JOURNEY TO RECYCLING AT ISB!

People Planet Purpose

**ES Asking the Hard Questions**

How can we, as 2<sup>nd</sup> graders, persuade our community to reduce waste?

**MS Designing to Pass '1 Second' Challenge**

**HS Developing the Process to Make it all Work**

# Gyms 1-3 Lighting Upgrade

An ISB Facilities Sustainability@ISB Project

**THE POSITIVE IMPACT** (per year)

- 192 MWH SAVED
- 196 Metric Tons of CO<sub>2</sub>e
- 6kg of Mercury
- 100,000 RMB

**Equal to 2.5 Tanker Trucks of Gasoline**

Long-Lasting! Brighter!  
NO Mercury!

People Planet Purpose | SUSTAINABLE DEVELOPMENT GOALS 13 CLIMATE ACTION

**SCHEDULE**

FRI | HS LOW LITTER LUNCH | R&S  
SAT 11-4PM | CLOTH SWAP | WE FOR SHE  
SUN 9-2PM | CARBOOT | NCC

**MONDAY**  
NO BEEF LUNCH  
TRUE COST 3:30@THEATER | WE FOR SHE

**ALL WEEK**  
BIKE WEEK | NET IMPACT ISB  
E-WASTE COLLECTION  
RECYCLING LAUNCH | NET IMPACT ISB

# Earth Day @ ISB

People Planet Purpose

# Cafeteria Lights Off Program

A *sodexo* Sustainability@ISB Project

**THE POSITIVE IMPACT** (per year)

- 60 MWH SAVED
- 60 Metric Tons of CO<sub>2</sub>e
- 29,000 RMB

**Equal to Planting 1,000 Trees!**

People Planet Purpose | SUSTAINABLE DEVELOPMENT GOALS 13 CLIMATE ACTION

# ISB Removes Single-Use Plastics from Food Service!

**NO STRAWS**  
**NO PLASTIC BOTTLES**  
**NO CUPS**

SUSTAINABLE DEVELOPMENT GOALS

12 RESPONSIBLE CONSUMPTION AND PRODUCTION  
14 LIFE BELOW WATER

Reduce Waste Generation | Reduce Marine Pollution

People Planet Purpose | *sodexo*

# SUSTAINABLE DEVELOPMENT GOALS

IN THE CLASSROOM & IN THE ISB SUSTAINABILITY ROADMAP

People Planet Purpose

# Real Food from Real Places!

*sodexo* | People Planet Purpose

Langfang, Hebei (60 km from ISB)  
Baoding, Hebei (200 km from ISB)  
Qinhuangdao, Hebei (330 km from ISB)

# DO YOUR PART AND RECYCLE!

ISB Target: Reduce waste per student by 60%

**PAPER** NO FOOD OR LIQUIDS  
**#1, 2, 5 PLASTIC** CHECK THE #  
**CANS**  
**OTHER** WHEN IN DOUBT THROW IT OUT

12 RESPONSIBLE CONSUMPTION AND PRODUCTION | People Planet Purpose

# NET IMPACT ISB 27 Electric Buses

A Student-Driven Sustainability@ISB Project

**THE POSITIVE IMPACT**

- >300,000 fossil-free km
- >2000 less kg of NO<sub>x</sub>
- >100 less kg of PM<sub>2.5</sub>

Cleaner air for everyone!

People Planet Purpose | SUSTAINABLE DEVELOPMENT GOALS 11 SUSTAINABLE CITIES AND COMMUNITIES