



The Next Generation of Supply Chain Leaders

A Meeting of the CSUSM Global Supply Chain
Management Society

The ASCM San Diego Chapter Leadership Team

Preston W. Blevins, Chair of the Eco-Sustainability Group

April 16, 2024

The Next Generation of Supply Chain Leaders

MEETING OUTLINE:

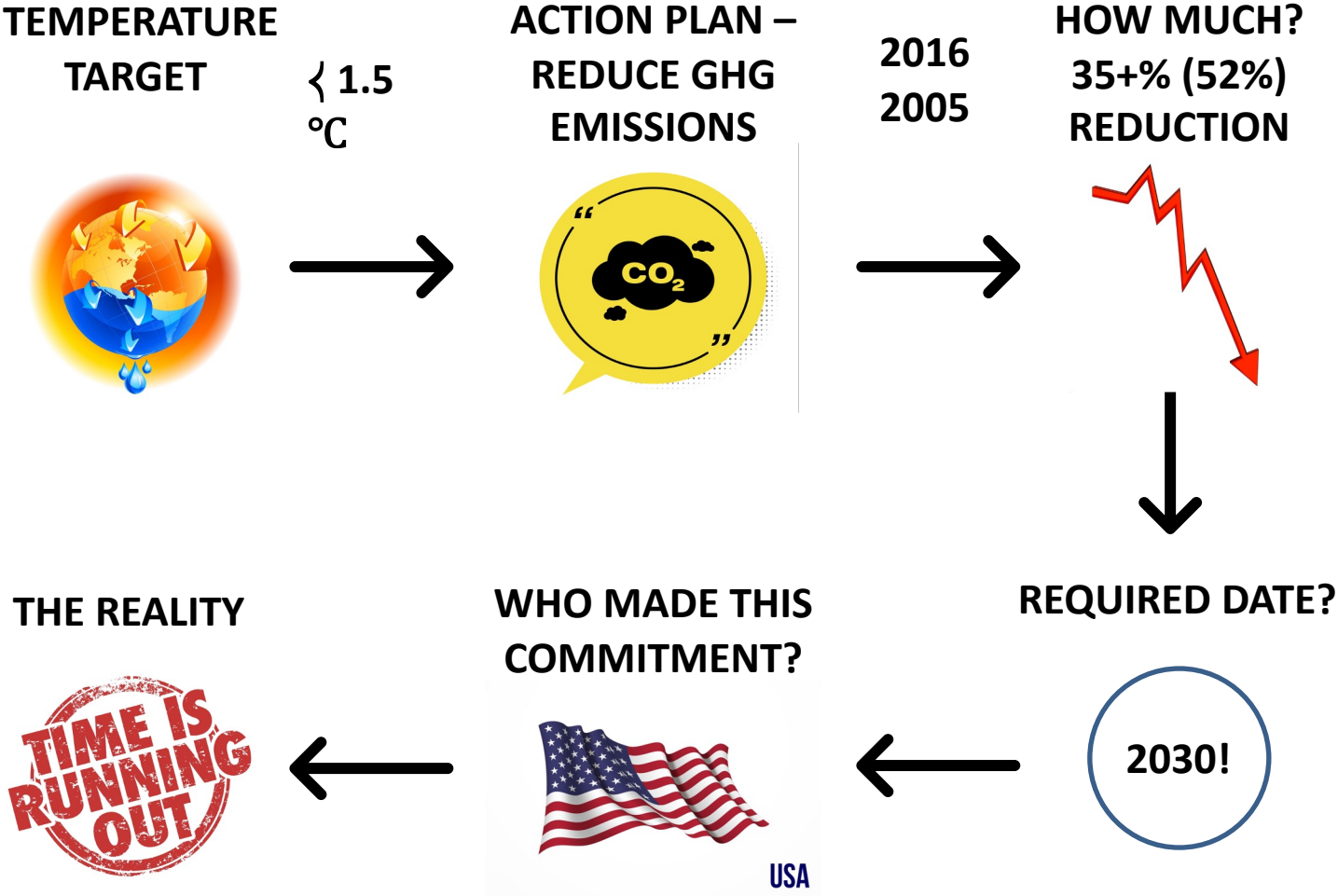
- ASCM – THE VALUE PROPOSITION
- ECO– SUSTAINABILITY, AN INTRODUCTION
- INTERACTIVE DISCUSSIONS: PANEL – ATTENDEE Q&A

ECO-SUSTAINABILITY: AN EXECUTIVE OVERVIEW

Preston W Blevins, CPIM-F, CIRM, CSCCP, FBPICS



THE CURRENT SITUATION



DISCUSSION OUTLINE

- **Circumstance + Time = Actions**
- **History & Catalysts For Change**
- **The Essential Toolkit**
- Reporting Standards
- Long-Term Planning
- Thinking Outside The Box
- The Future Starts Now





CIRCUMSTANCE + TIME = ACTIONS

CIVIC



INDUSTRY

THE SAME EXCEPT.....DIFFERENT



CIRCUMSTANCE + TIME = ACTIONS

CIVIC



THE SAME EXCEPT.....DIFFERENT



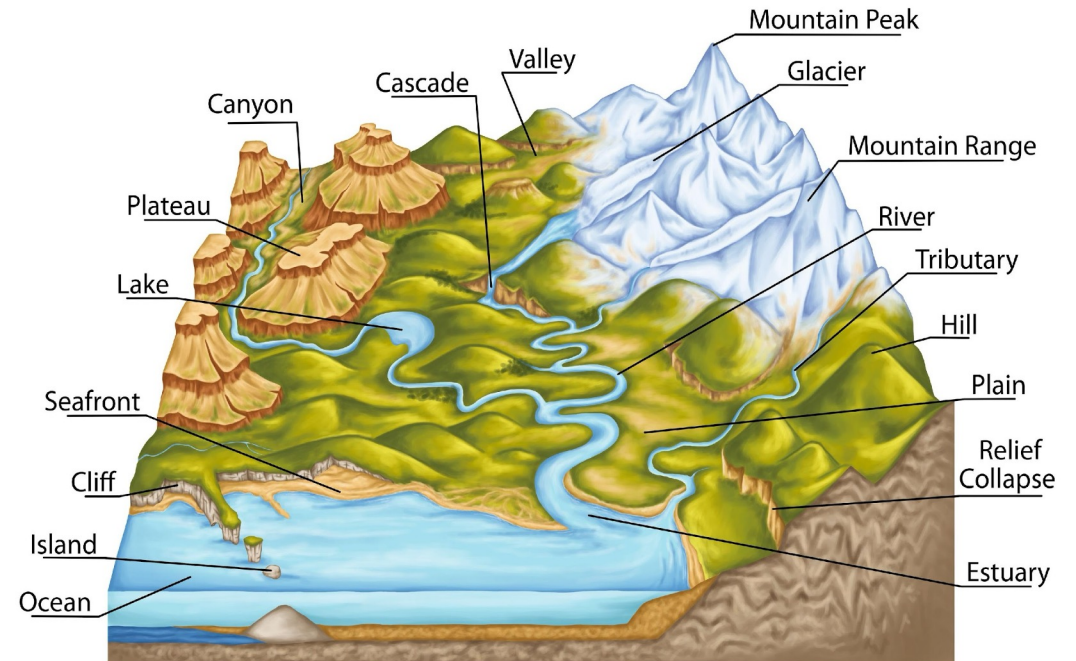
ECO-SUSTAINABILITY: GLOBAL, NATIONAL, REGIONAL, STATE, AND LOCAL CIRCUMSTANCES





ECO-SUSTAINABILITY: GLOBAL, NATIONAL, REGIONAL, STATE, AND LOCAL CIRCUMSTANCES

- **Geography**
- **Climate Zones**
- **Food Sufficiency**
- **Energy Sufficiency**
- **Coastal/Landlocked**
- **History**
- **Demographics**





CIRCUMSTANCE + TIME = ACTIONS



INDUSTRY

THE SAME EXCEPT.....DIFFERENT



ECO-SUSTAINABILITY: CORPORATE STRATEGY CONSIDERATIONS

- **Geography**
- **Factory Location & Orientation**
- **Factory Construction – LEED**
- **Energy/Power Source**
- **Corporate Configuration**
- **Placement in the Value Chain**





ECO-SUSTAINABILITY: CORPORATE STRATEGY CONSIDERATIONS

- **How Work is Performed**
- **Product Performance**
- **Capital Budget**
- **Supply-Chain Partners**
- **Regulatory Compliance**
- **ESG/Financing Status**



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UN CONFERENCE
STOCKHOLM, SWEDEN
FIRST ENVIRONMENTAL
MEETING OF GOVERNMENTS

1973
UN ENVIRONMENTAL
PROGRAM
BASIS FOR MUCH OF
INTERNATIONAL LAW
TODAY

1987
BRUNDTLAND REPORT
“OUR COMMON FUTURE”
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OUTLINES A COMMON
AGENDA FOR CHANGE

1988
THE INTERGOVERNMENTAL
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(IPCC)
UN BODY FOR ASSESSING THE
SCIENCE RELATED TO CLIMATE
CHANGE

1992
RIO DECLARATION –
AGENDA 21
ACTION BLUEPRINT ON
SPECIFIC ISSUES
RELATING TO
SUSTAINABILITY

1993
LEED
(LEADERSHIP IN ENERGY &
ENVIRONMENTAL DESIGN)
GREEN BUILDING RATING
SYSTEM

1995
SCOR
SUPPLY CHAIN
ANALYSIS AND DESIGN

2000
UN GLOBAL COMPACT
TEN PRINCIPLES
STRATEGIC POLICY
INITIATIVE FOR
BUSINESSES

1997
GLOBAL REPORTING
INITIATIVE (GRI)
TRANSPARENCY AND
DIALOGUE BETWEEN
COMPANIES AND THEIR
STAKEHOLDERS

1997
KYOTO PROTOCOL
COUNTRY-BY-COUNTRY
AGREEMENT TO
REDUCE GHG





TEN PRINCIPLES OF THE UN GLOBAL COMPACT – PRINCIPLES 7, 8, AND 9

- **Precautionary approach**
- **Promote greater environmental responsibility**
- **Encourage environmentally friendly technologies**



2008
WATER FOOTPRINT NETWORK
COMPREHENSIVE WATER ACCOUNTING & MANAGEMENT METHODOLOGY

2011
GHG PROTOCOL SCOPE 3
IN SUPPORT OF SUPPLY-CHAIN ACCOUNTING & MANAGEMENT

2012/2015
UN SUSTAINABLE DEVELOPMENT GOALS
RELATED TO THE ENVIRONMENTAL, POLITICAL, AND ECONOMIC CHALLENGES FACING HUMANITY

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ISO 14064
COLLABORATION WITH THE GHG PROTOCOL ON GHG ACCOUNTING, ETC

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UNITED NATIONS ENCOURAGES ALL BUSINESS STAKEHOLDERS TO ADOPT ESG

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2011
SASB
 SUSTAINABILITY ACCOUNTING STANDARDS BOARD

2015
TCFD
 TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

1993
LEED
 (LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN) GREEN BUILDING RATING SYSTEM

2021
ISSB
 INTERNATIONAL SUSTAINABILITY STANDARDS BOARD

2015
SBTi
 SCIENCE BASED TARGETS initiative

2022
EU CSRD
 CORPORATE SUSTAINABILITY REPORTING DIRECTIVE

2023?
U.S. SEC
 (U.S. SECURITIES EXCHANGE COMMISSION)
 INVESTOR PROTECTION, EFFICIENT MARKETS, CAPITAL FORMATION

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THE ESSENTIAL TOOLKIT

- **SCOR-DS (Supply Chain Operational Reference)**
- **GHG Protocol (Scopes 1,2 and 3)**
- **Water Footprint Assessment**





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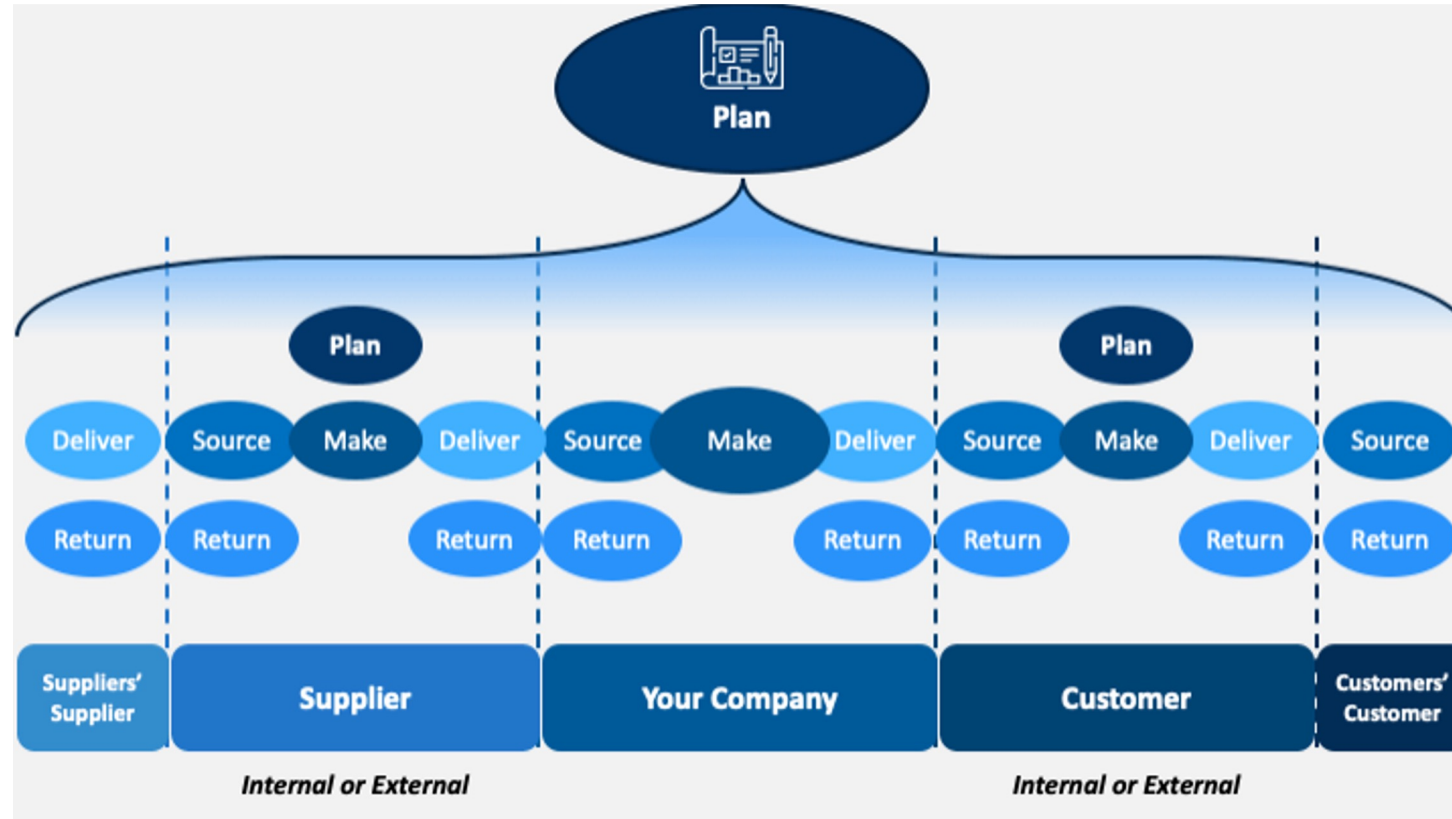
THE SCOR FRAMEWORK

- **Supply-chain modeling methodology**
- **Supply Chain Council**
- **Global 1000**
- **Merged with ASCM (APICS)**
- **Rated Number two SC educator (APICS #1)**
- **Over 5000 implementations**





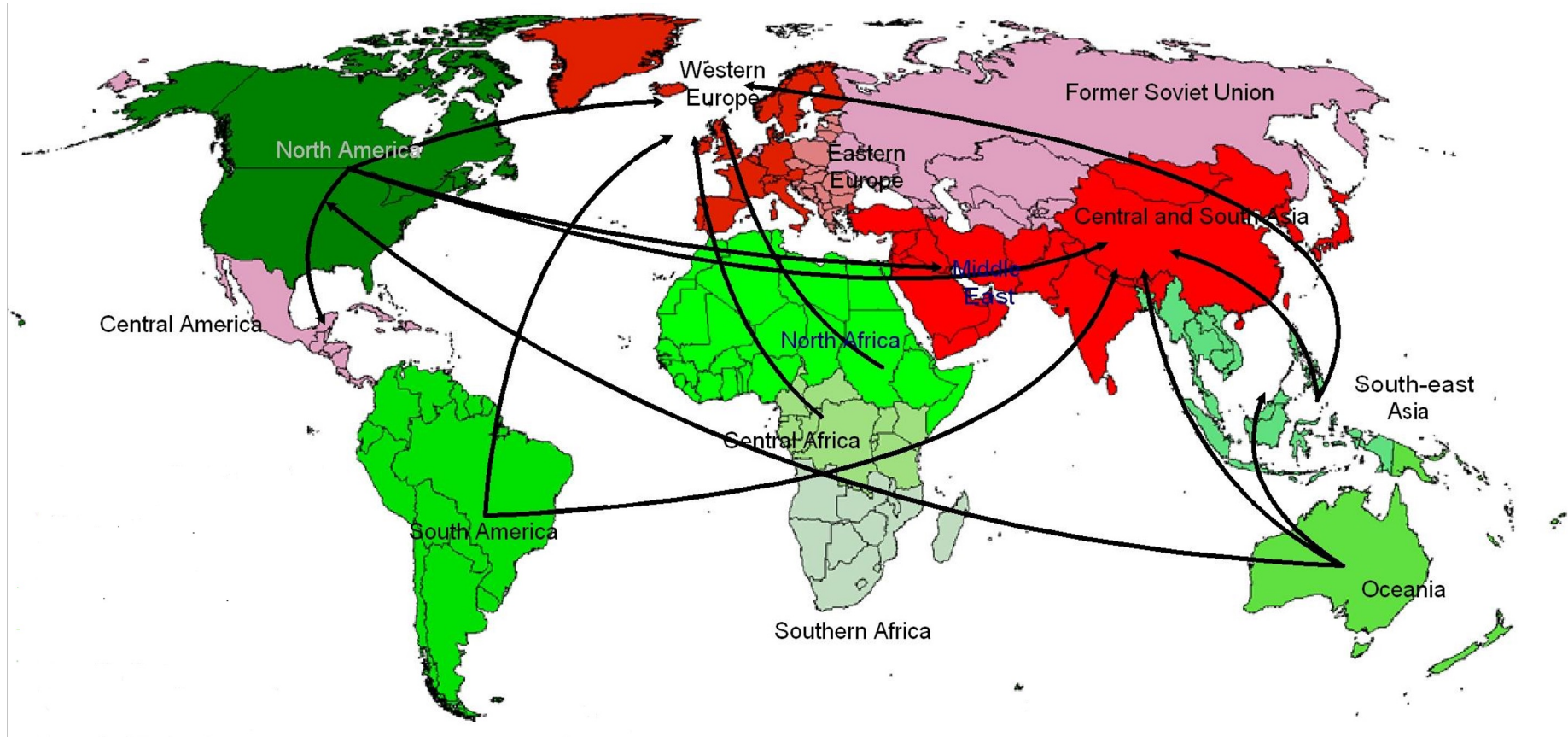
THE SCOR FRAMEWORK



- Five (5) integrated processes (Plan, Source, Make, Deliver, Return)
- Cascades down to four additional levels of progressively more detail
- Metrics linked (SCORcard)
- Best practices linked
- Benchmarking
- A visual representation of a holistic integrated global network



THE SCOR FRAMEWORK



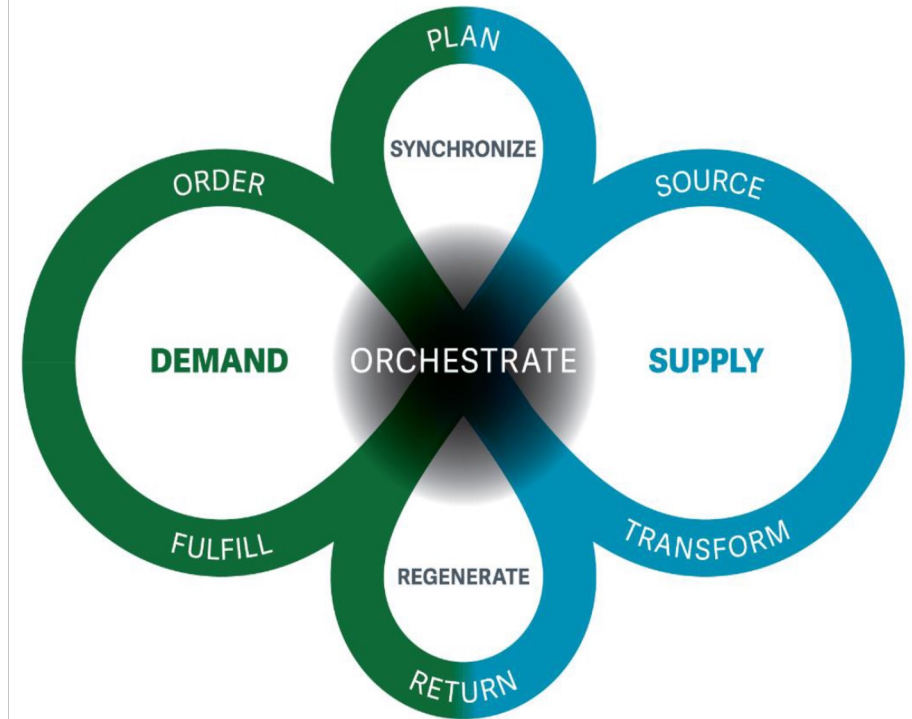
A visual representation of a holistic integrated global network

Source: Arjen Hoekstra, Water Footprint Network



SCOR – DS (DIGITAL STANDARD)

- **Best Practices**
- **Performance Measures/Metrics**
- **Performance Attributes**
- **Basic Processes**
- **Orchestrate/Enable**

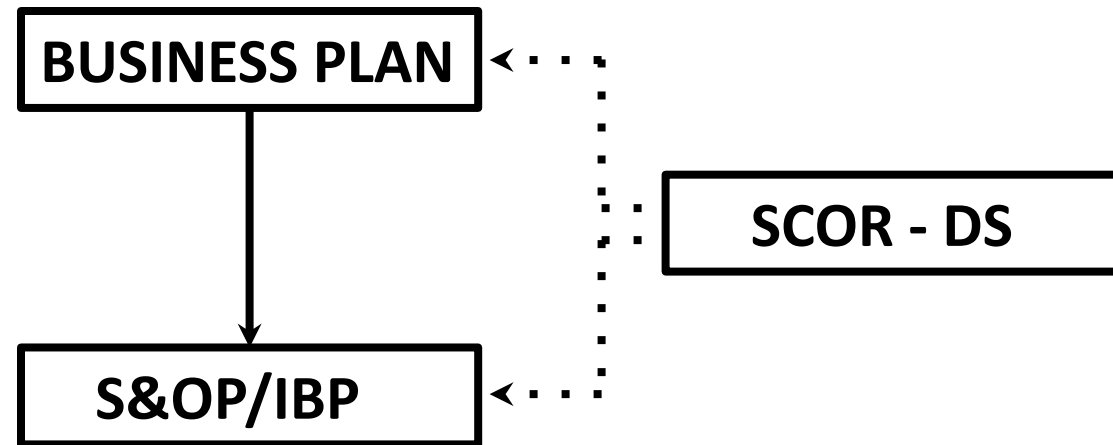


A PREREQUISITE PERSPECTIVE



SCOR – DS: SOMETHING TO THINK ABOUT

CAN A BUSINESS PLAN BE VIABLE WITHOUT A SCOR ANALYSIS OF CRITICAL SUPPLY CHAINS?

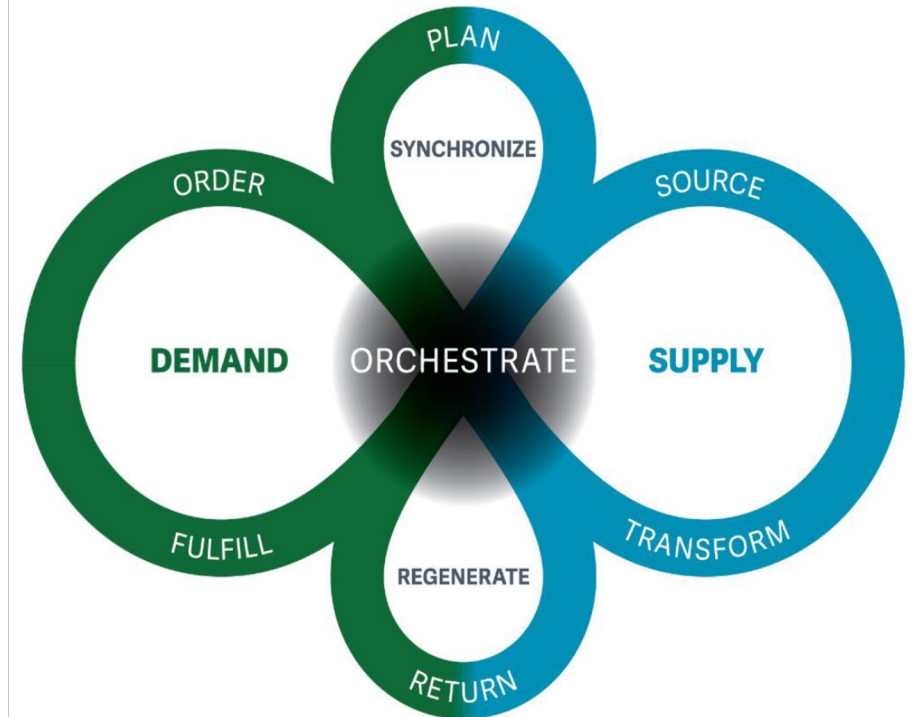


IF SCOR HAD BEEN WIDELY ADOPTED COULD THAT HAVE MODERATED THE IMPACT OF COVID-19 ON SUPPLY CHAINS?



SCOR – DS (DIGITAL STANDARD)

- **SCOR - DS Quick Reference Guide**
- **SCOR - DS Overview**
- **SCOR Webinar**
- **Additional Webinar**
- **SCOR - DS Workshop:
Check the Schedule on the
Eco-Sustainability Website**





THE ESSENTIAL TOOLKIT

- SCOR-DS (Supply Chain Operational Reference)
- **GHG Protocol (Scope 1,2 and 3)**
- Water Footprint Assessment





THE GHG PROTOCOL

- **Disciplined GHG accounting & planning methodology**
- **Covers the:**
 1. **Enterprise (Scope 1)**
 2. **Source of energy supply (Scope 2)**
 3. **Supply-chain (Scope 3)**
 4. **Distribution (Scope 3)**
 5. **Product life-cycle (Scope 3)**



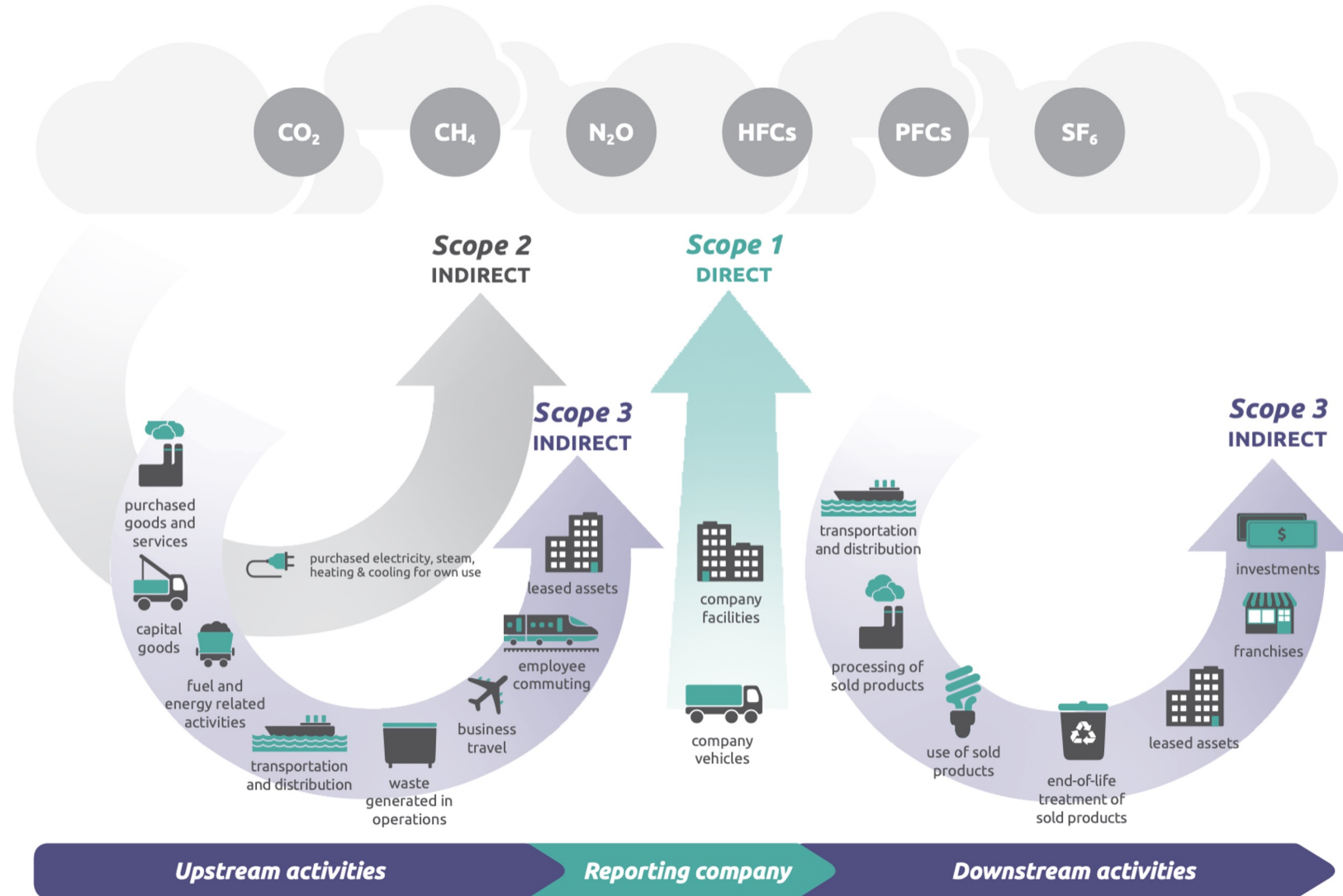


THE GHG PROTOCOL

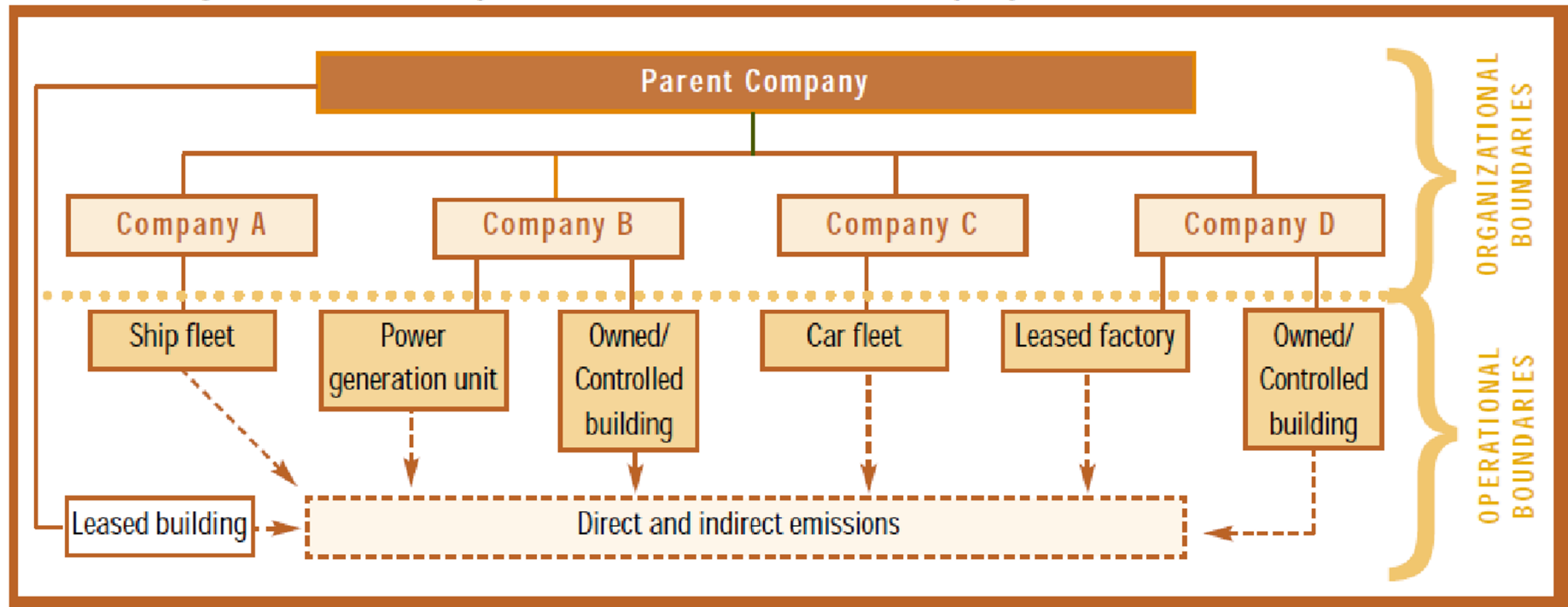
- **De facto standard – Global 500**
- **Flexibility**
- **Auditable**
- **Collaborative – ISO**
- **Reports often housed in the CDP (Carbon Disclosure Project) DB**



Overview of GHG Protocol Scopes and Emissions Across the Value Chain



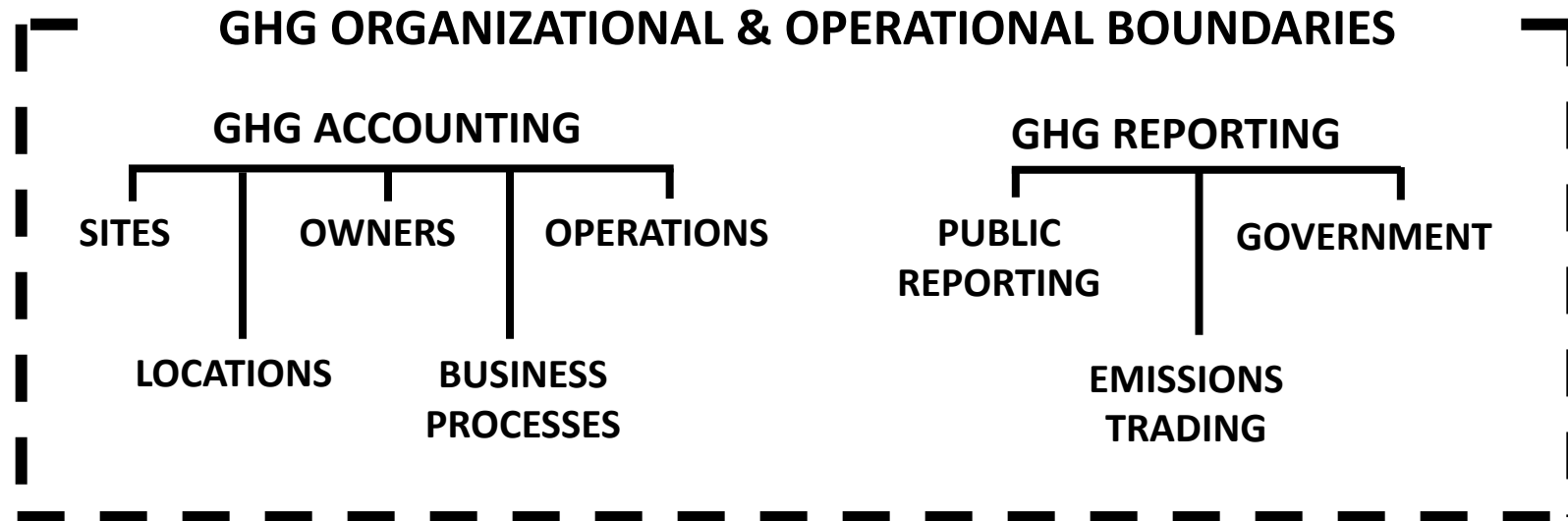
Source: GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard



**SOURCE: GHG PROTOCOL
CORPORATE ACCOUNTING & REPORTING STANDARD – REVISED EDITION**



THE GHG PROTOCOL SCOPE 1

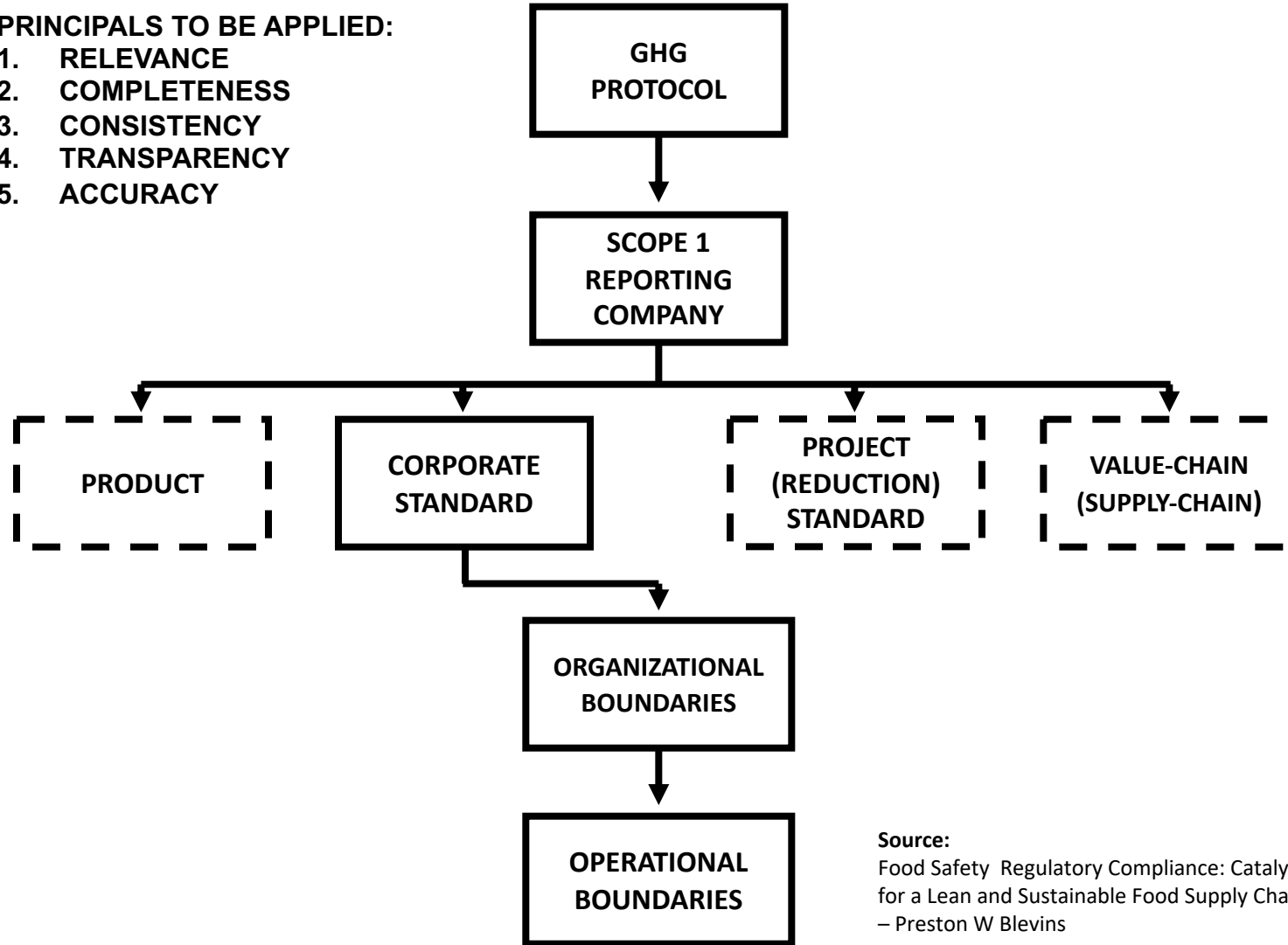


Source:

Food Safety Regulatory Compliance: Catalyst for a Lean and Sustainable Food Supply Chain – Preston W Blevins

PRINCIPALS TO BE APPLIED:

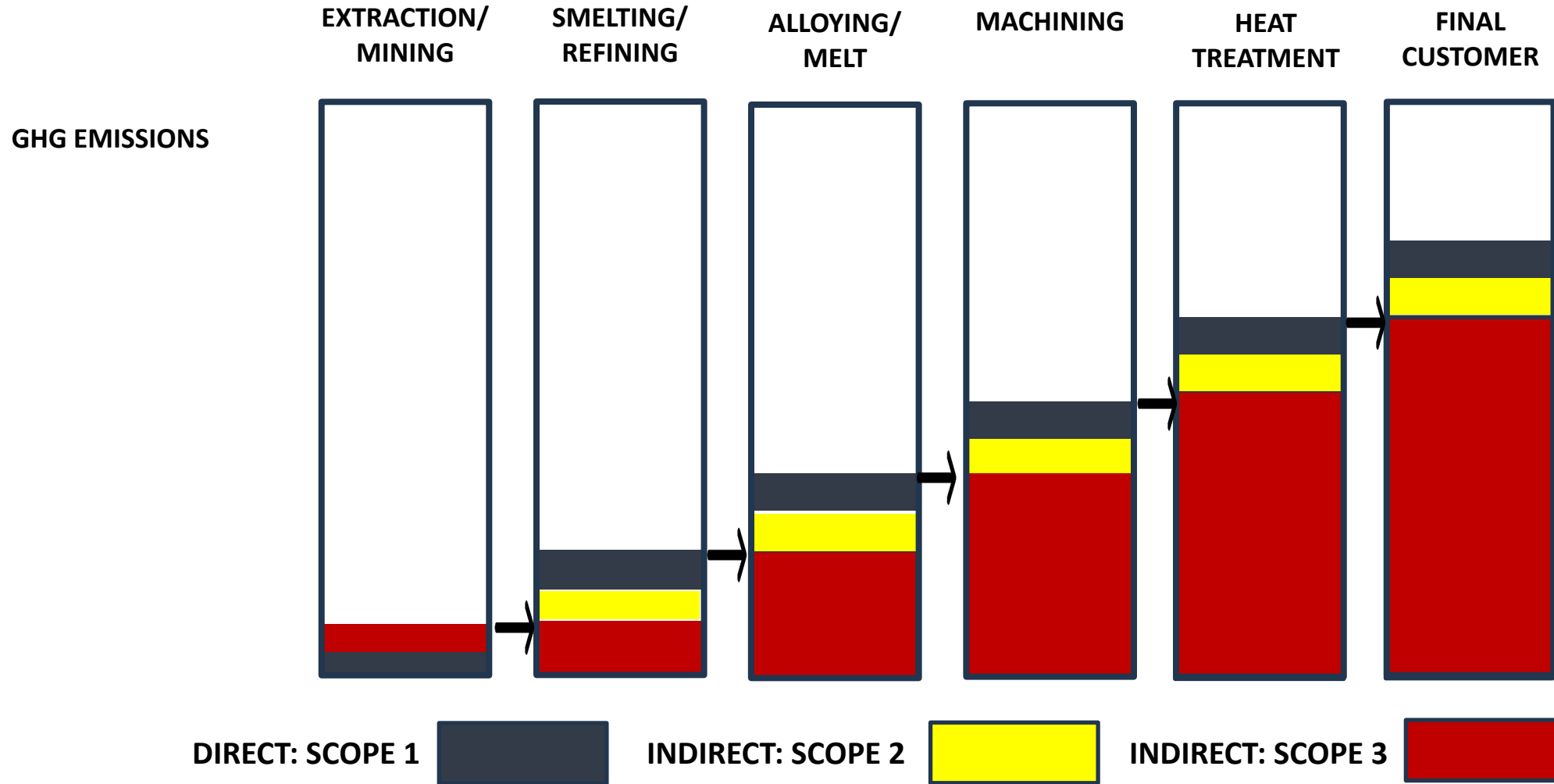
1. RELEVANCE
2. COMPLETENESS
3. CONSISTENCY
4. TRANSPARENCY
5. ACCURACY



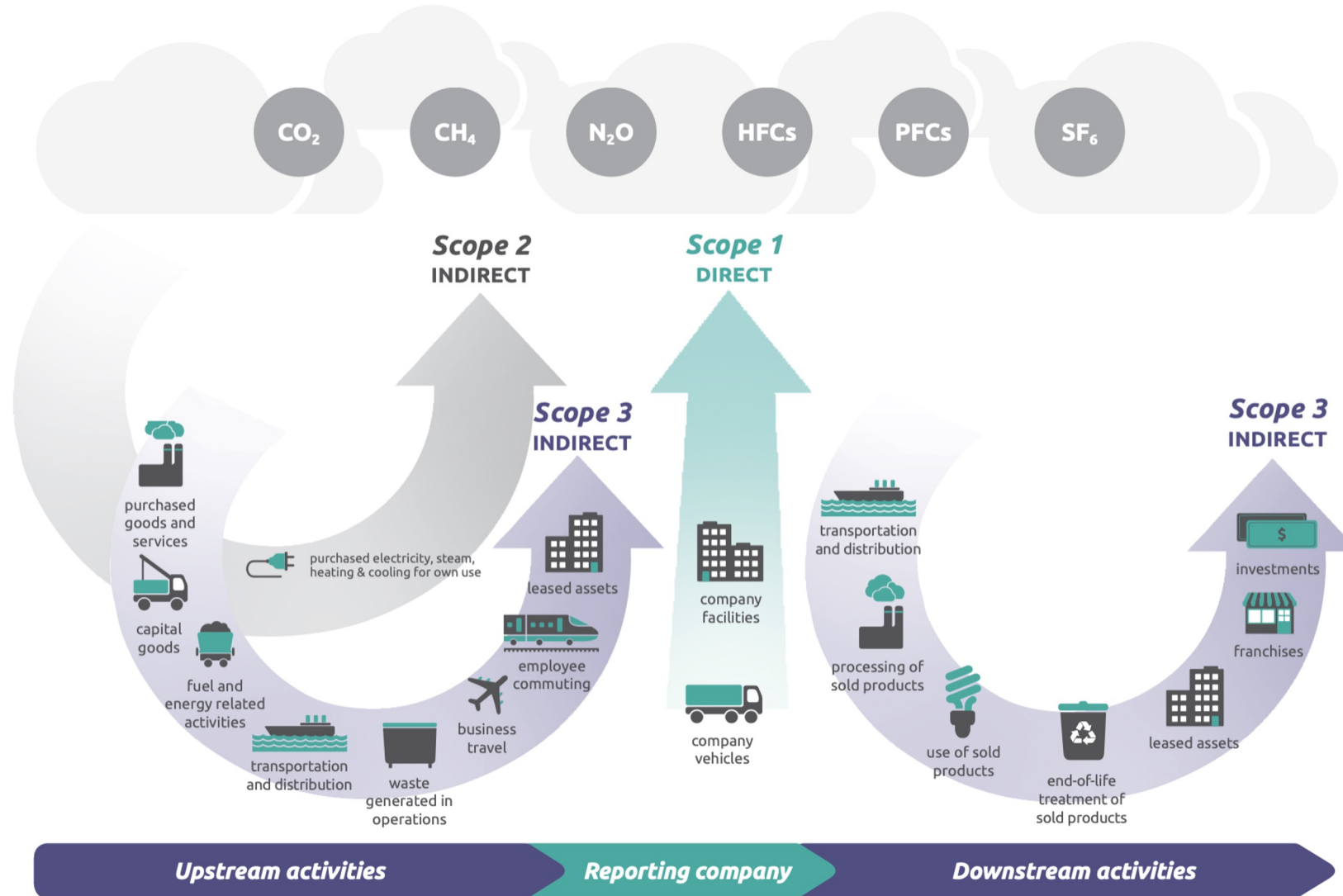
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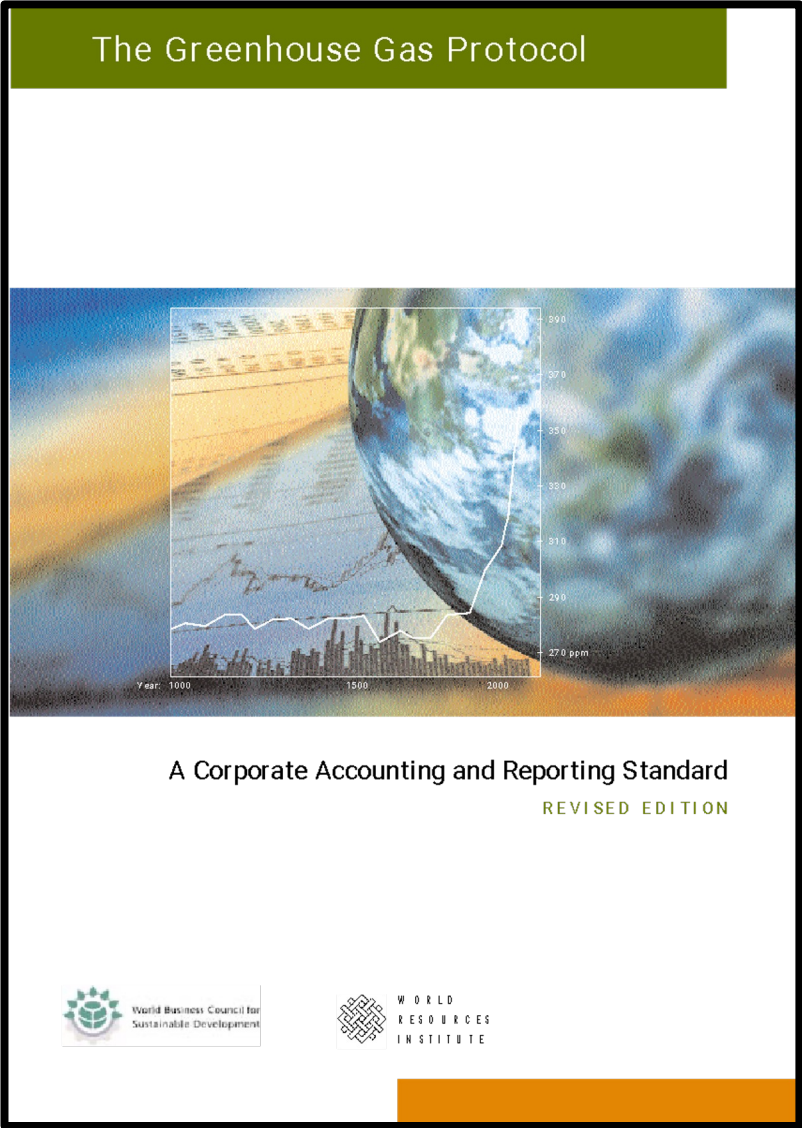
GHG PROTOCOL'S "UP STREAM" INHERITANCE



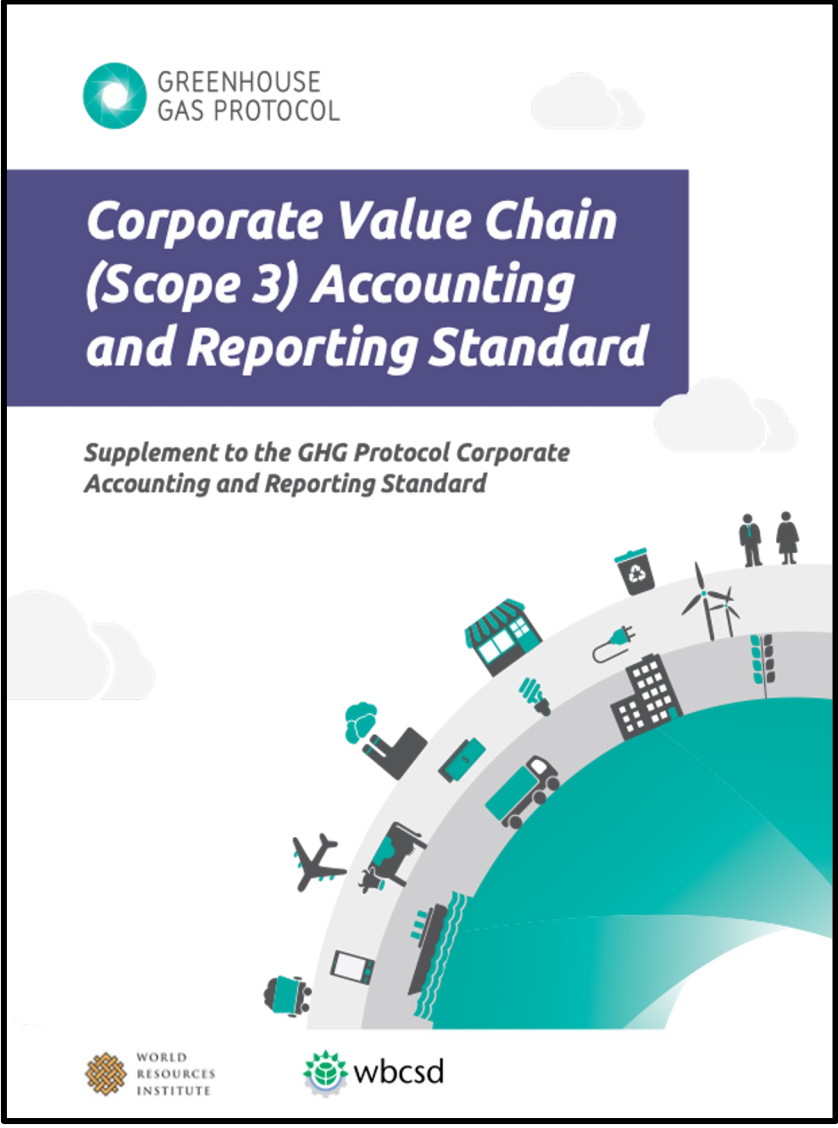
Overview of GHG Protocol Scopes and Emissions Across the Value Chain



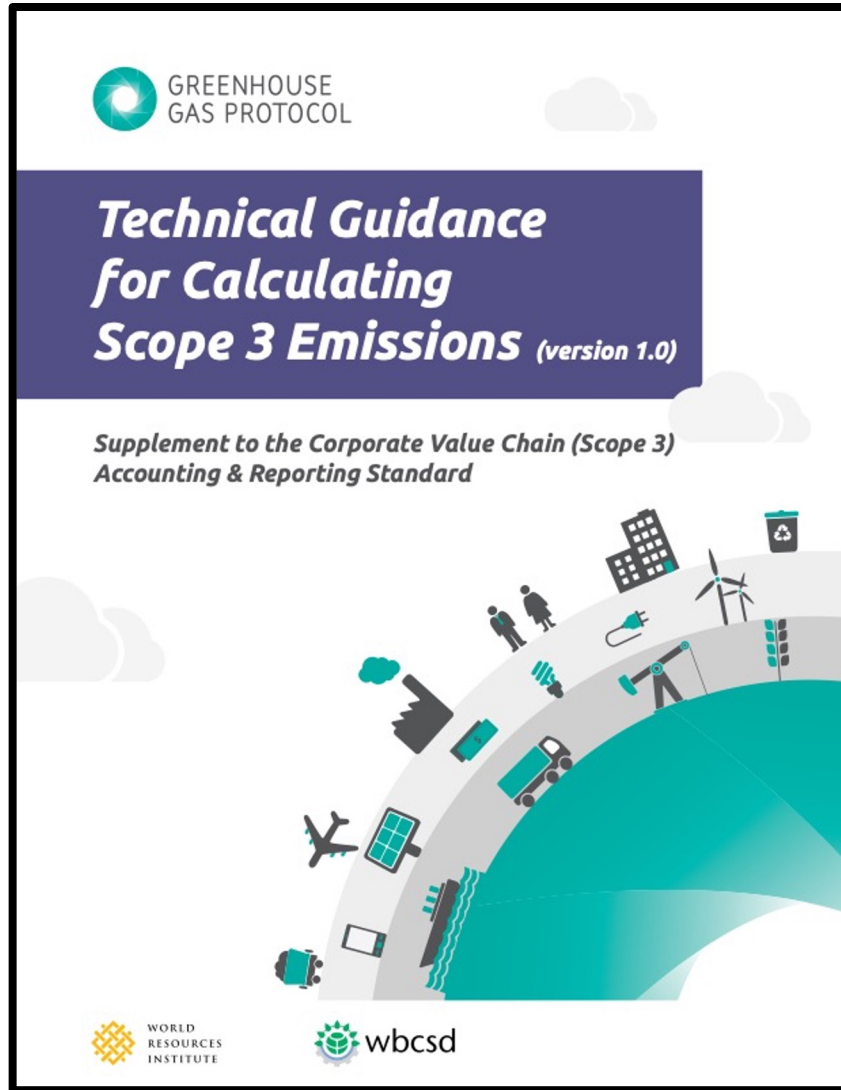
Source: GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard



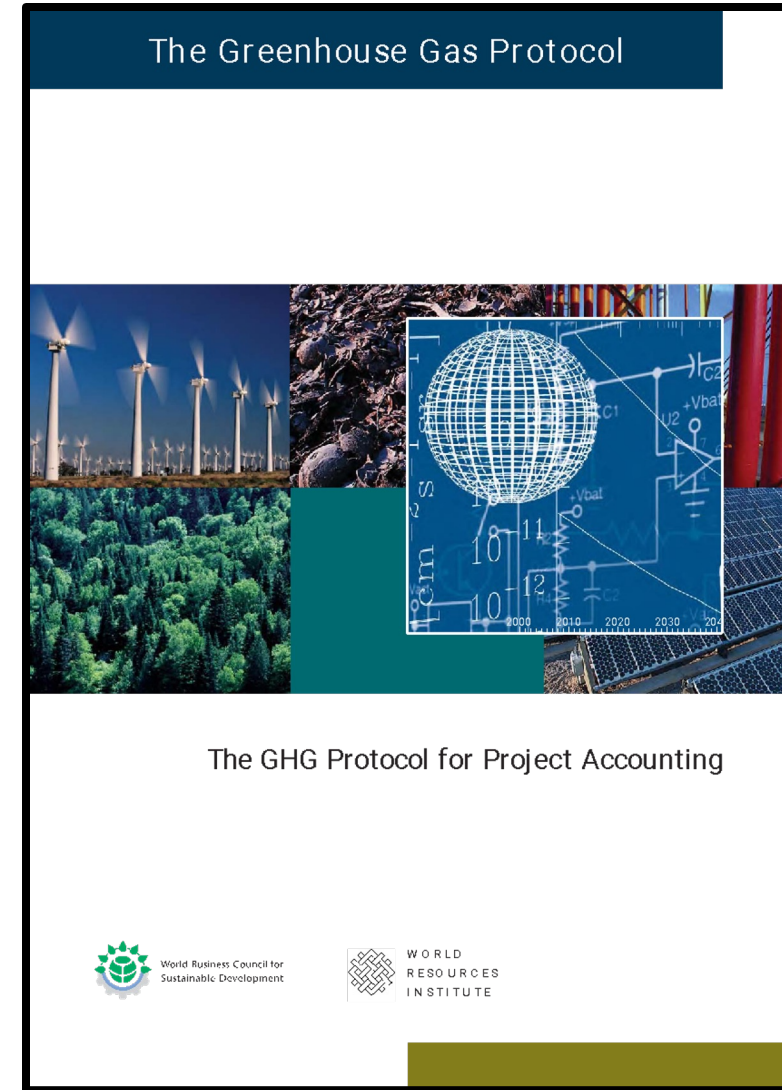
Greenhouse Gas Protocol



GHG Website



[Scope 3 Calculation Guidance](#)



[GHG Project Accounting](#)

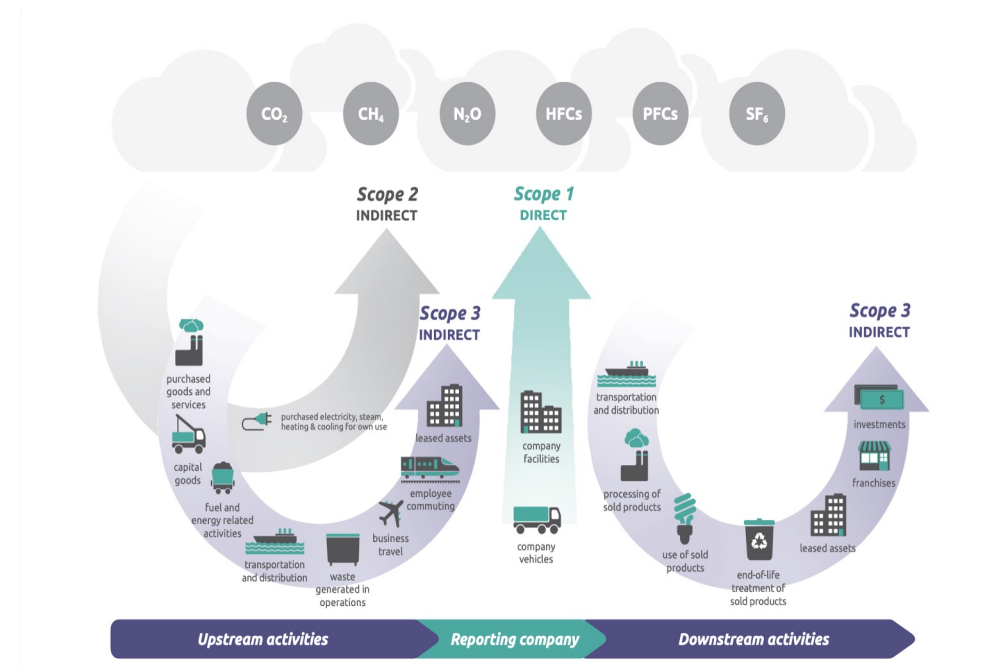


THE GHG PROTOCOL

For a More Comprehensive Overview of:

- SCOPES 1 and 2
- SCOPE 3

Go to the [Eco – Sustainability Webinar Recordings Page](#)





THE ESSENTIAL TOOLKIT

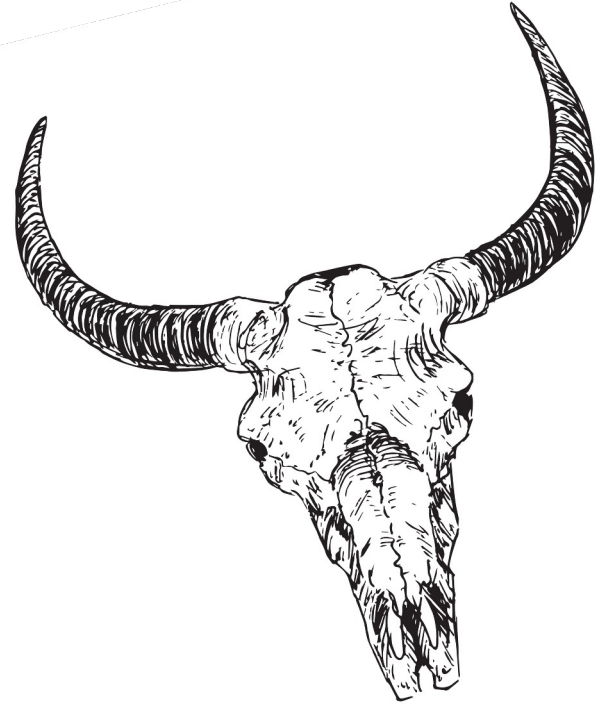
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- GHG Protocol (Scopes 1,2 and 3)
- **Water Footprint Assessment**





SOMETHING TO THINK ABOUT, A PERSON CAN.....

- Live for decades after being exposed to air pollution (still not a good situation)
- Live in an artificially cooled environment for a long time
- Live for eight to twenty-one (8-21) days without food
- Live without water for about three (3) days!





THE WATER PROBLEM - DROUGHT

- **50% of global useable water will be consumed by 2030 – WRI 2020**
- **Water stress – will impact 50% of the global population by 2030 – UNEP**
- **Southwestern USA**
- **The food, electricity, and water connection**
- **Water wars & migration**





THE WATER FOOTPRINT ASSESSMENT

- **Conceptually similar to the SCOR reference model**
- **Relatively new to N.A., useable and evolving**
- **Supported by global governmental agencies**
- **Multi-phased; water assessment, accounting, sustainability**
- **Flexible**



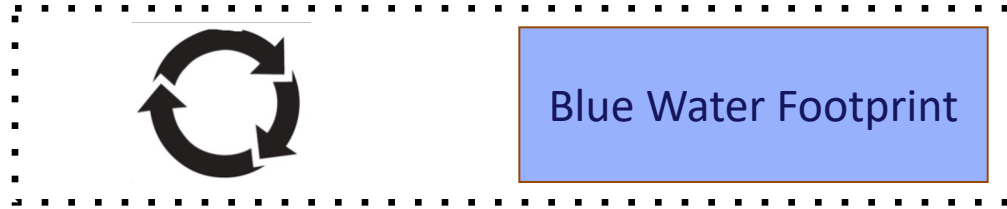


NEW CLASSIFICATION OF WATER TYPES

The Traditional
Statistics on
Water Use



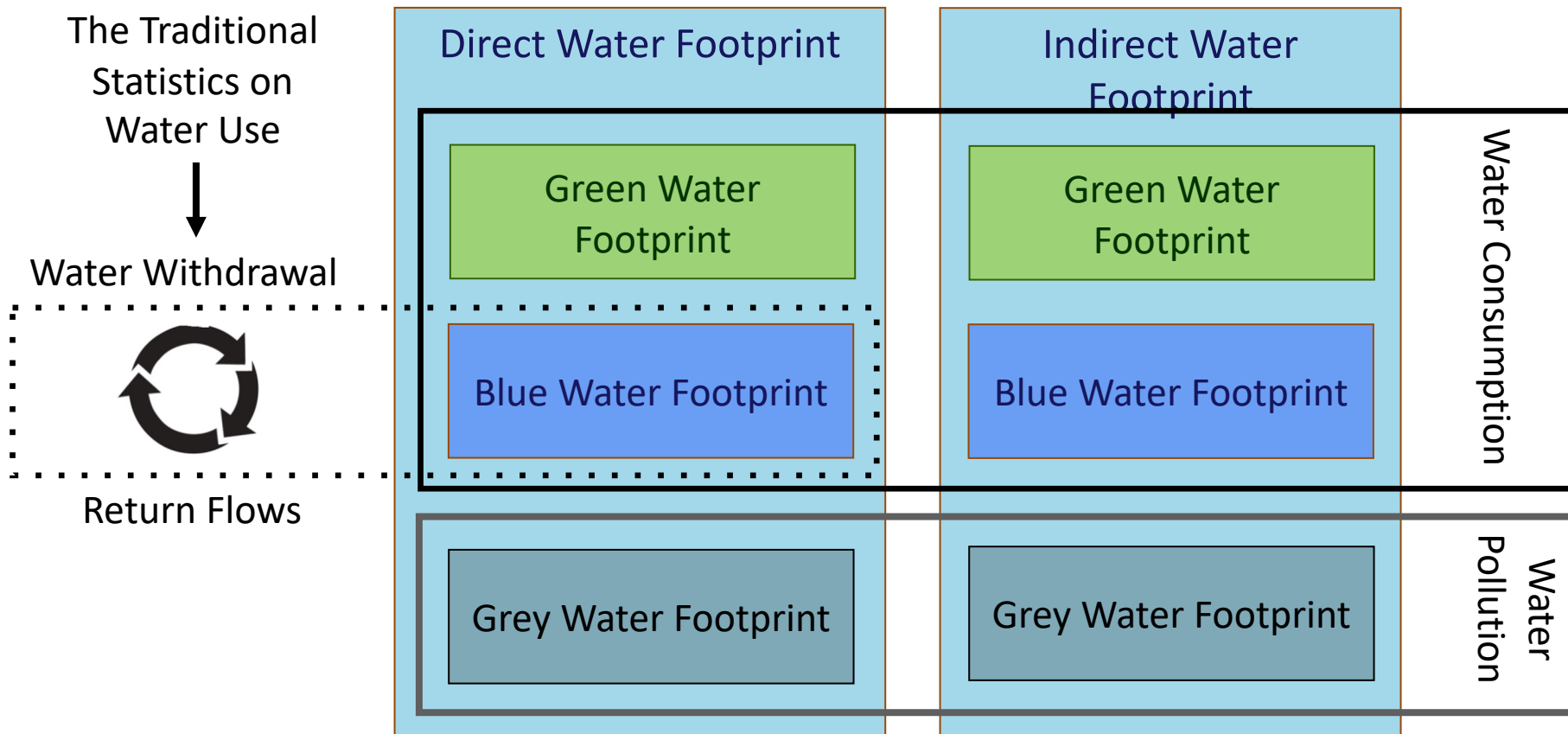
Water Withdrawal



Return Flows



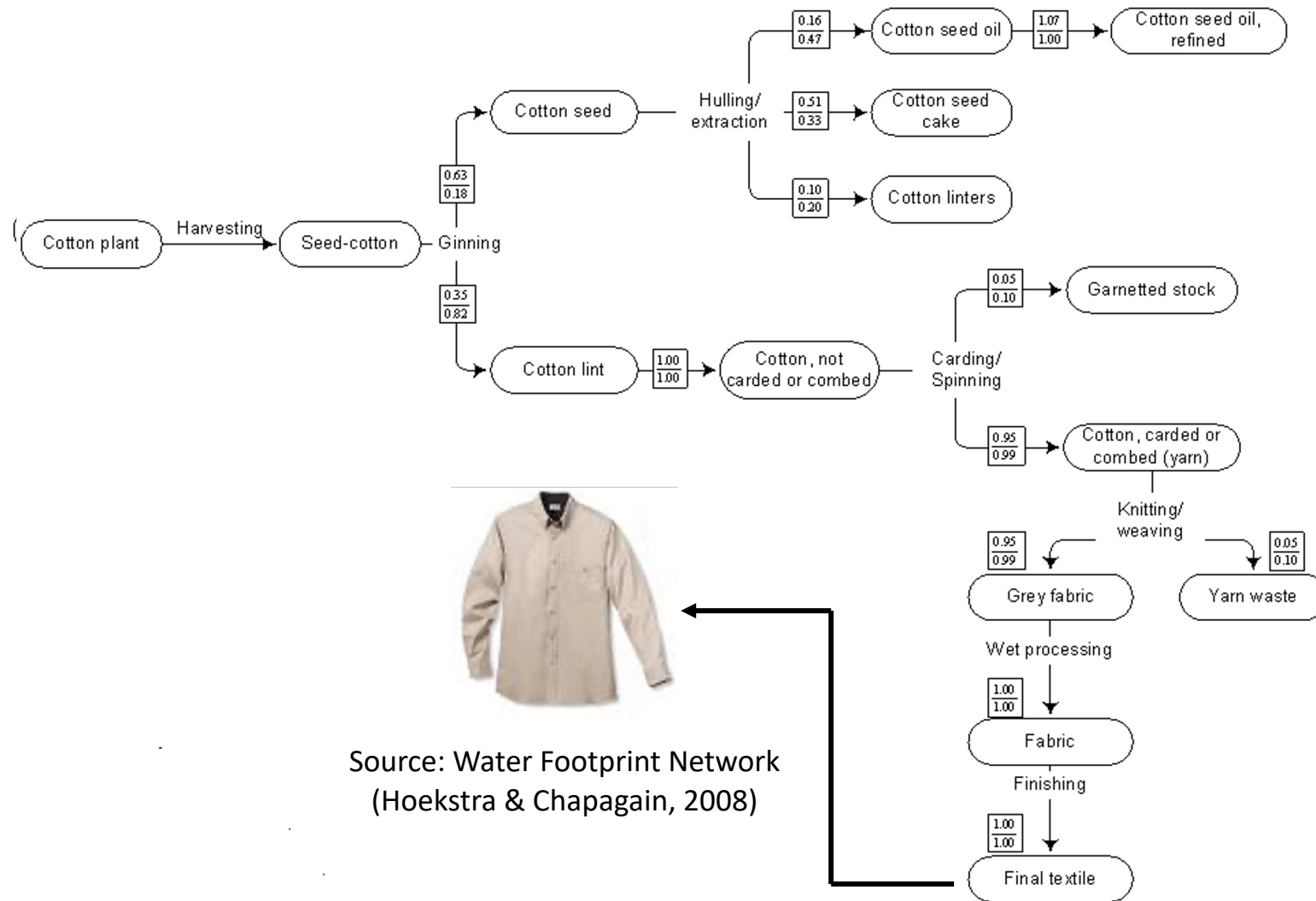
NEW CLASSIFICATION OF WATER TYPES



Source: Arjen Hoekstra, Water Footprint Network



INDIRECT/VIRTUAL WATER USE



Source: Water Footprint Network
(Hoekstra & Chapagain, 2008)



THE WATER FOOTPRINT NETWORK



Steel for 1 Car
302,833 Liters of Water =
80,000 US Gallons



1 Beer
298 Liters of Water =
79 US Gallons



1 Hamburger
2,400 Liters of Water =
634 US Gallons

Objects not to Scale



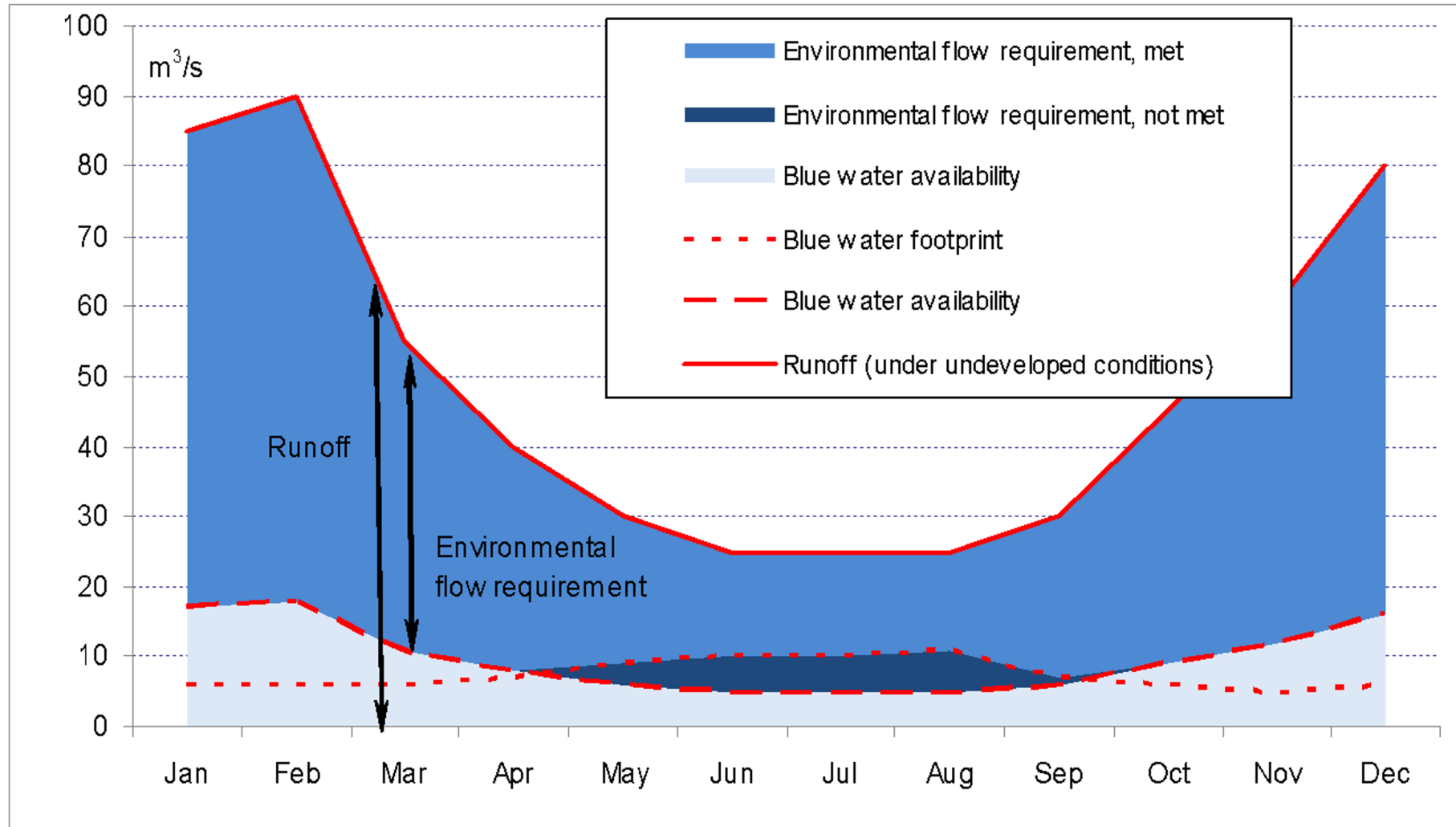
THE WATER FOOTPRINT NETWORK

- **Each supplier water source is geographically considered..**
- **With its historical seasonal patterns**
- **Science based ecology needs**
- **“Hot spots”**
- **Standard calculations established**





SCIENCE BASED ECOLOGY NEEDS



Source: Arjen Hoekstra, Water Footprint Network

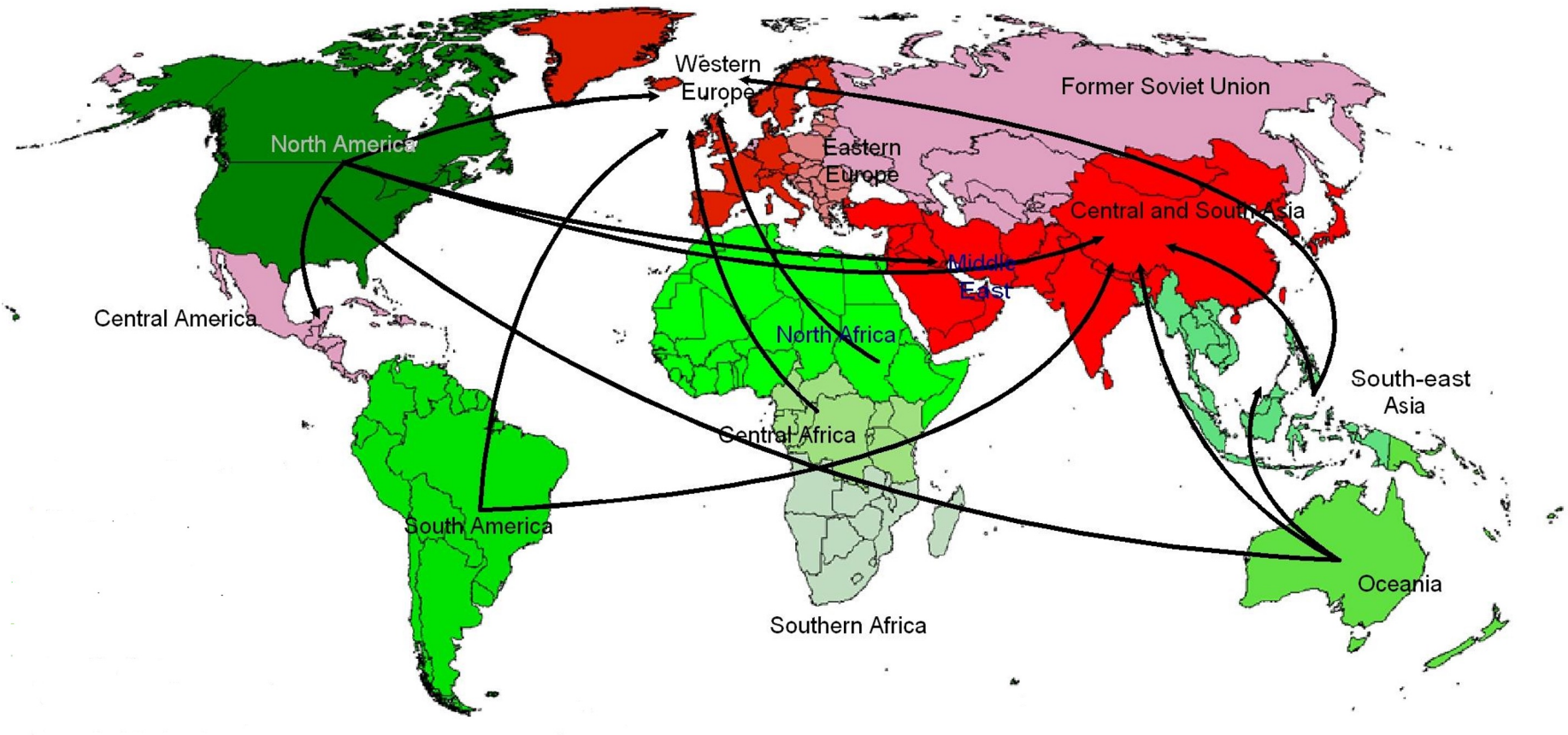


COTTON FOR EXPORT – FORMER ARAL SEA, CENTRAL ASIA

Source: Arjen Hoekstra, Water Footprint Network



GEOGRAPHICAL PERSPECTIVE



Source: Arjen Hoekstra, Water Footprint Network

METHODOLOGY	PURPOSE	RESULT
SCOR	<ol style="list-style-type: none"> 1. SUPPLY-CHAIN "DISCOVERY" 2. BENCHMARKING 3. SUPPLY-CHAIN EFFICIENCY 4. VISIBILITY 5. RISK MANAGEMENT 6. INCORPORATE SUSTAINABILITY 7. TRANSITION PLANNING 	<ol style="list-style-type: none"> 1. PROFIT 2. RISK MANAGEMENT 3. RELIABILITY 4. IMPROVED COMPETITIVENESS 5. FOUNDATION FOR SUSTAINABILITY PLANNING 6. MANAGED TRANSITION
GHG PROTOCOL	<ol style="list-style-type: none"> 1. END TO END CARBON ACCOUNTING 2. CORPORATE REDUCTION PLANNING 3. SUPPLY-CHAIN COLLABORATION 4. PRODUCT LIFE-CYCLE PLANNING 	<ol style="list-style-type: none"> 1. COST REDUCTION. 2. RISK MANAGEMENT 3. REPUTATION MANAGEMENT 4. INNOVATION 5. MANAGED TRANSITION
WATER FOOTPRINT NETWORK	<ol style="list-style-type: none"> 1. END TO END WATER USAGE ACCOUNTING 2. CORPORATE REDUCTION PLANNING 3. SUPPLY-CHAIN COLLABORATION 4. PRODUCT LIFE-CYCLE PLANNING 	<ol style="list-style-type: none"> 1. RISK MANAGEMENT 2. REPUTATION MANAGEMENT 3. SUPPLY-CHAIN RELIABILITY 4. MANAGED TRANSITION 5. COST?



THE WATER FOOTPRINT ASSESSMENT

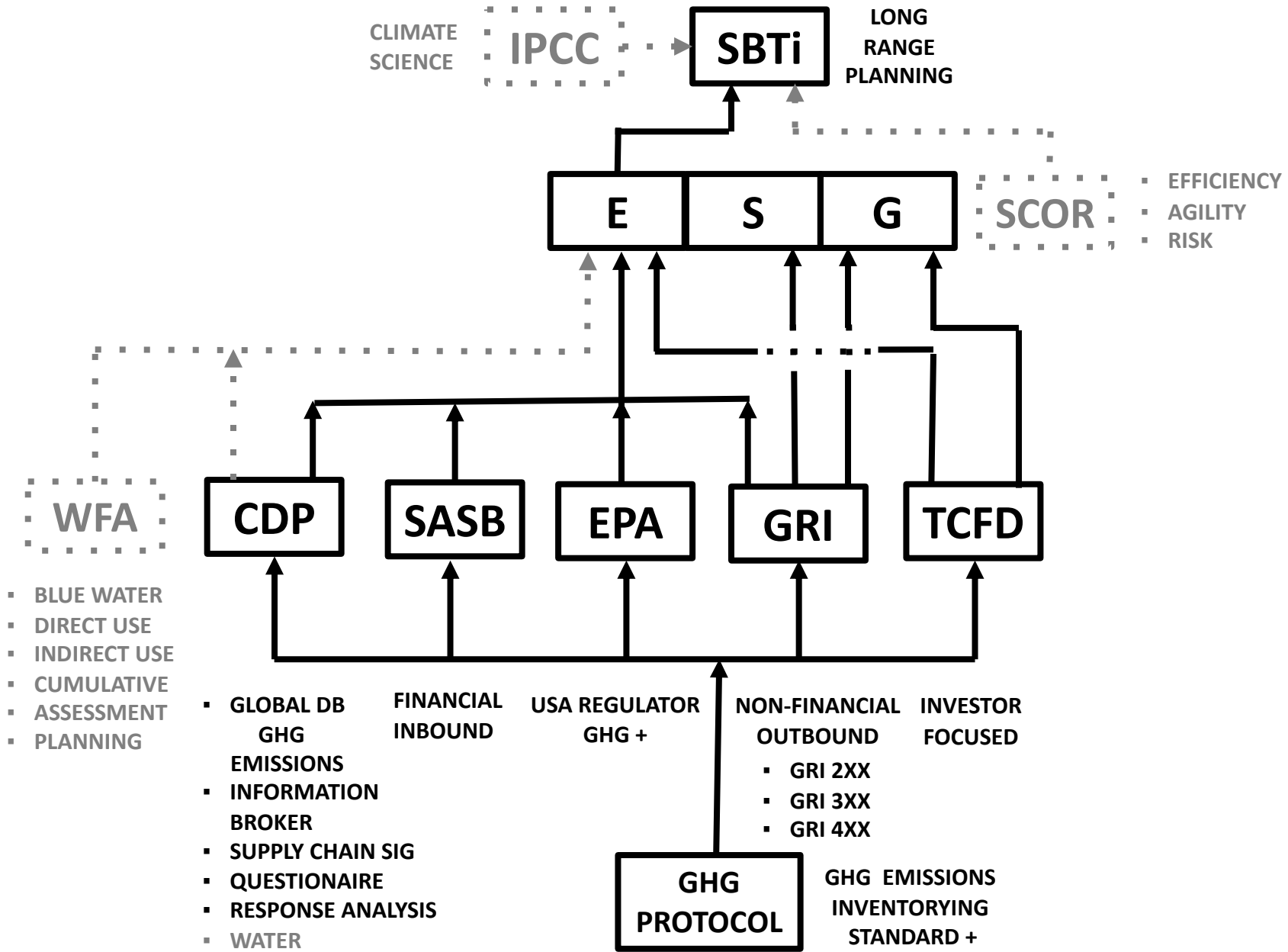
- Water Footprint Network [Website](#)
- Water Footprint Overview [Webinar](#)
- Water Footprint [Manual](#)
- Water Footprint [Calculator](#)



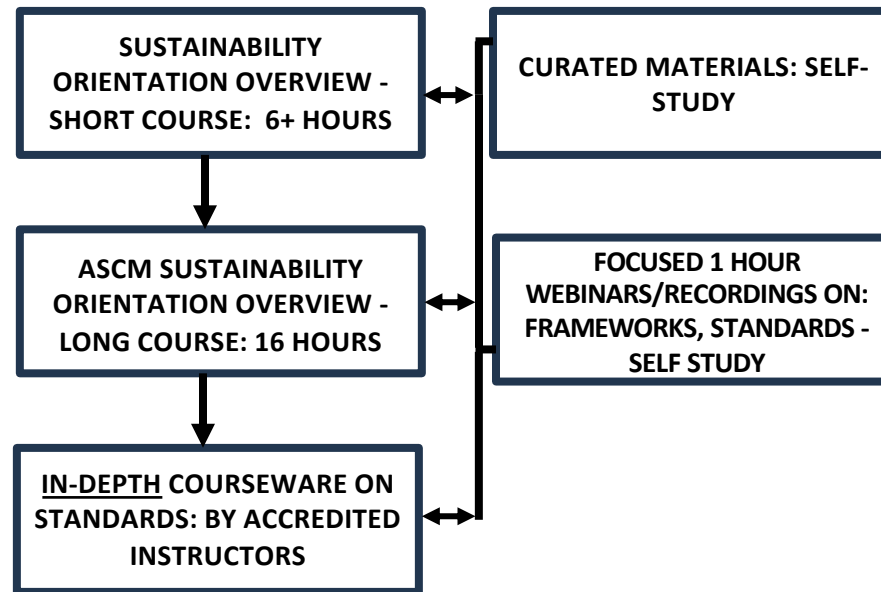
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CPIM-F, CSCP, CIRM
Director at Large
**Chair of the Eco-Sustainability
SIG**



Kim Kohler
CPIM, CSCP, CTSC
VP of Education
**Argonaut Manufacturing
Services Inc.**



Josselin Guesnard
CPIM, CSCP
Director at Large
Carrier Corporation



Christian Caballero
Director at Large
Collins Aerospace



Rohit Parangath
Director at Large
MilliporeSigma



Nick Lund
Member of Eco-Sustainability SIG
La Jolla Group



Annie Dolan
Member of Eco-Sustainability SIG
Northrop Grumman Corporation



Scan to see profiles
of board members

THANKS FOR INVITING US!

We look forward to partnering with you
as your career progresses

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eco@sandiego.ascm.org