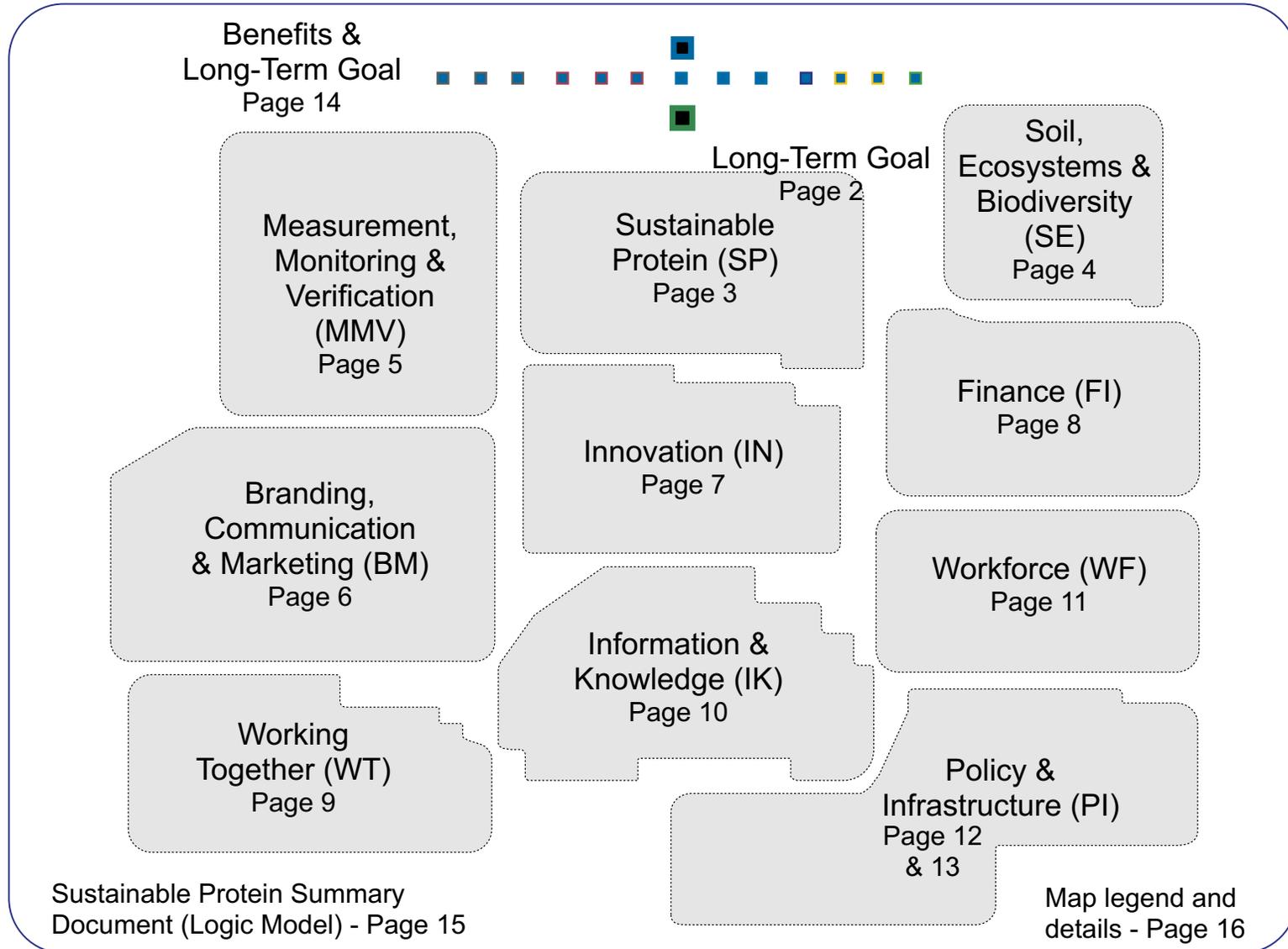


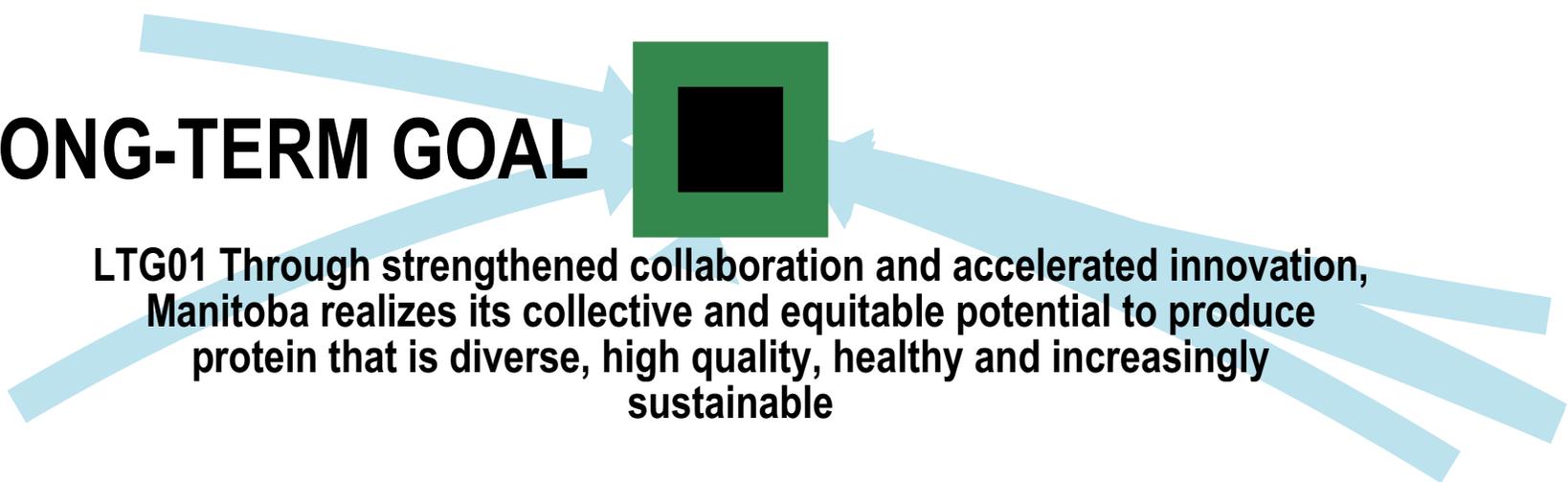
Manitoba Protein Advantage Strategy

A Collaborative Approach to Protein Impact

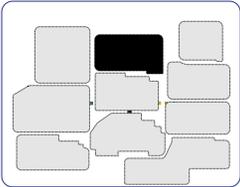
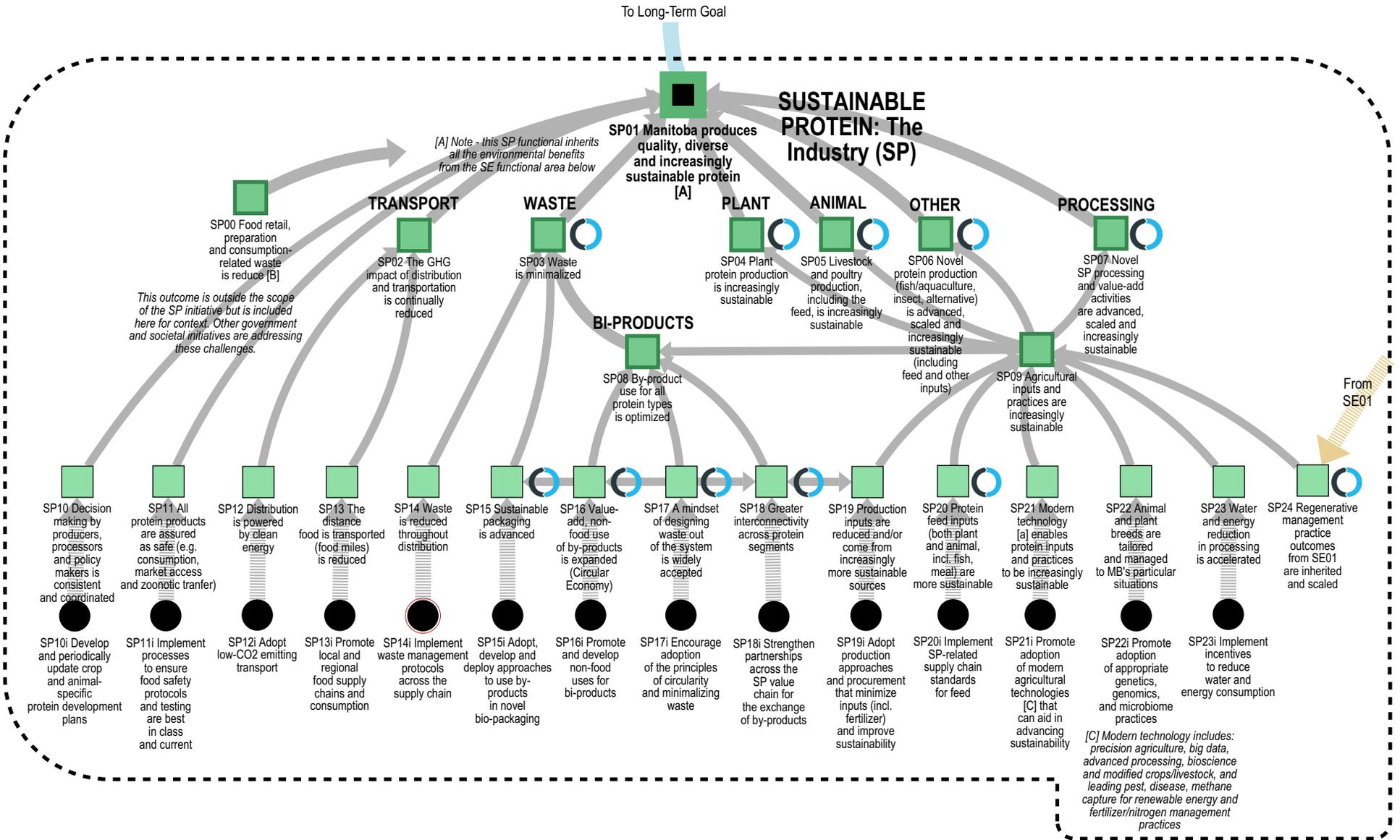
Compendium of Functional Areas



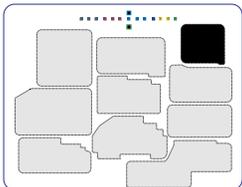
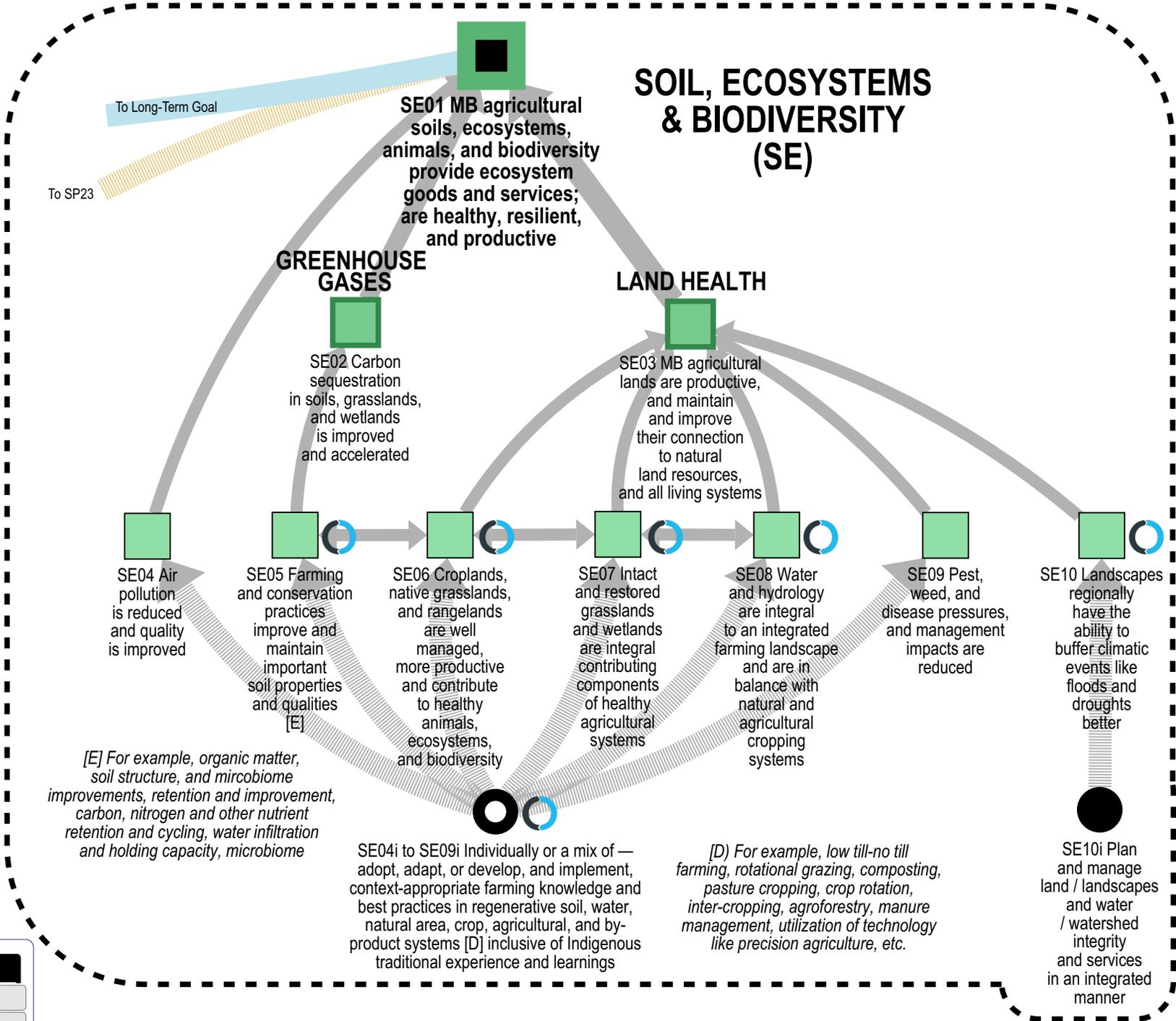
LONG-TERM GOAL



**LTG01 Through strengthened collaboration and accelerated innovation,
Manitoba realizes its collective and equitable potential to produce
protein that is diverse, high quality, healthy and increasingly
sustainable**



SOIL, ECOSYSTEMS & BIODIVERSITY (SE)



MEASUREMENT, MONITORING, AND VERIFICATION (MMV)

MMV01 MB and individual actors in the SP system measure, report, and value respectively their collective and individual sustainable protein activities and make adjustments accordingly

MMV02 COLLECTIVE: MB measures, reports, and values its collective sustainable protein activities, including this impact map, and makes adjustments accordingly

MMV03 INDIVIDUAL: Individual actors have robust sustainability data which they use to manage operations and communicate to markets

PERFORMANCE INDEX

MMV04 A simple but powerful SP PERFORMANCE INDEX measures and reports on the overall state and performance of the sector

BASELINE / BENCHMARKS

MMV05 MB establishes baseline data and benchmarks on which to measure improvements and performance against other jurisdictions

MMV06 Individual actors measure, monitor, verify and communicate the sustainability actions relevant to them

ENVIRONMENT

MMV13 CHG & CARBON reductions and storage are defined and tracked

MMV14 BIODIVERSITY benefits are defined and tracked

MMV15 ECOSYSTEM GOODS & SERVICES, especially water quality and watershed management, are defined and tracked

MMV16 SOIL HEALTH indicators are defined and tracked

MMV17 ANIMAL WELFARE benefits are defined and tracked

MMV18 SOCIAL benefits are defined and tracked

GOVERNANCE

MMV19 GOVERNANCE benefits are defined and tracked

MMV08 MEASUREMENT: Trusted and easy to use measurement methodologies are deployed to track and quantify core sustainability performance metrics

MMV09 MONITORING: Trusted monitoring methodologies are deployed to track core sustainability performance metrics

MMV10 VERIFICATION: Trusted processes and protocols are deployed to verify SP data and inform policy

MMV11 CERTIFICATION: Certification protocols are deployed to provide 3rd party authentication of SP data

MMV12 Develop MMV processes and protocols where they do not exist (leveraging existing methodologies as applicable)

MMV23 Support systems to manage MMV processes and data are transparent and traceable

MMV08i to MMV11i Assess, adopt, deploy (and integrate where appropriate) leading MMV and reporting

MMV12i Assess need and potential for additional MMV protocols (e.g., Indigenous production certification)

MMV20 Performance measurement of MB's SP strategy implementation (this framework)

MMV21 Core overarching SP metrics that are indicative of sustainability performance are defined, with an emphasis on ease of measurement

MMV22 The states of the nitrogen cycle and other "hallmark" indicators are tracked and interpreted

MMV20i Measure and track progress and impact of the interventions and outcomes in this framework

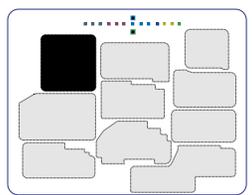
MMV21i Assess, modify and adopt core overarching SP metrics on which to measure and communicate action

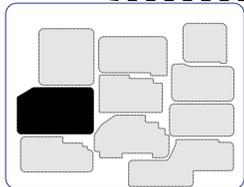
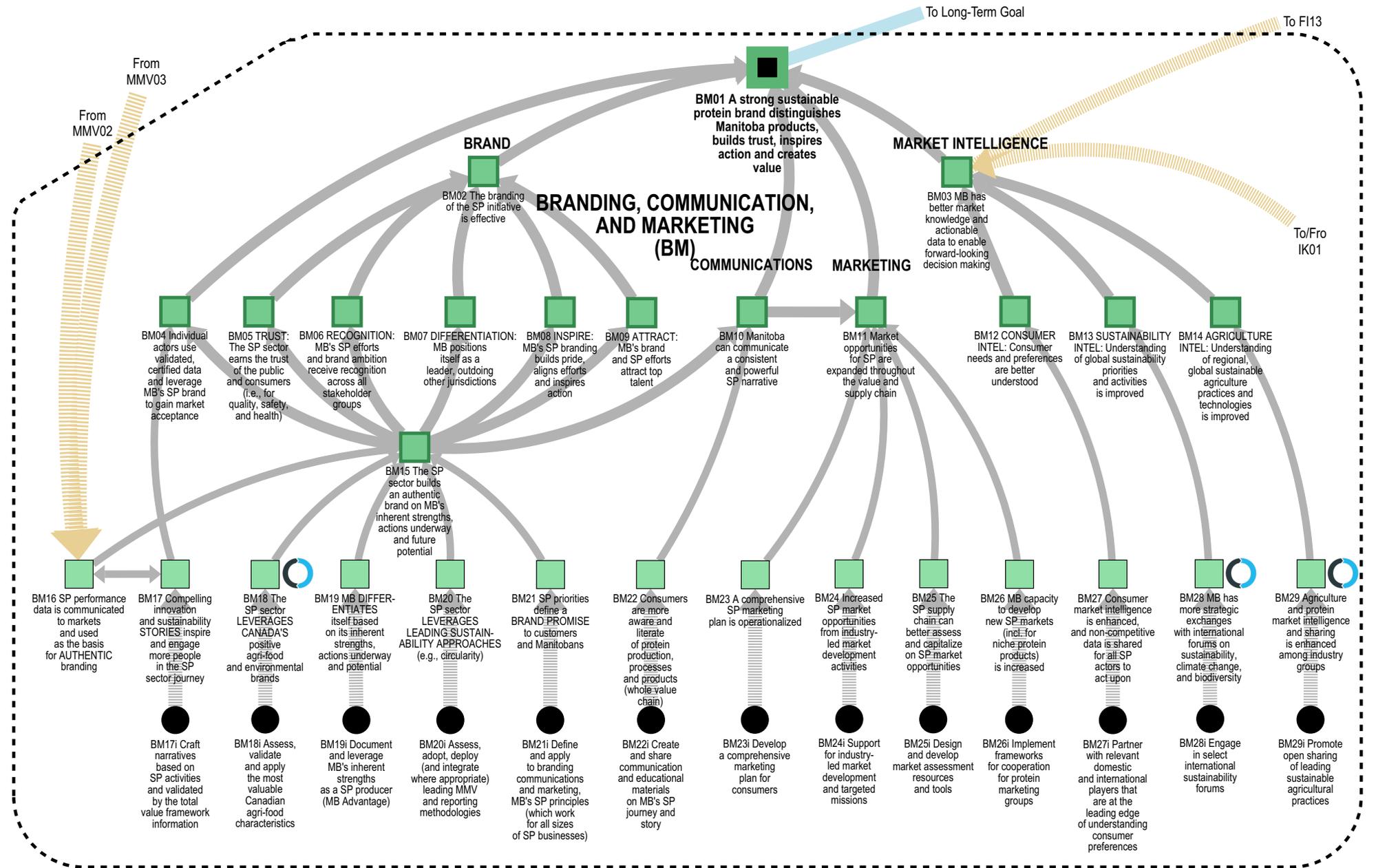
MMV22i Measure and track performance of key "hallmark" indicators

MMV23i Implement blockchain transaction systems throughout the supply chain

MMV13i to MMV19i Measure and track performance of key sustainability metrics, to be determined

This list of sustainability attributes will need to be assessed for applicability to MB





To Long-Term Goal

[F] Innovation is ideas, knowledge and technology applied to deliver a performance improvement. It is not just an idea, but an idea that has been made to work.

INNOVATION (IN)

IN01 Innovation [F] delivers more impactful SP activities and grows globally competitive innovative enterprises

IN02 MB continually improves its sustainability standing (as measured by the SP performance index - MMV03) and is viewed as a leading SP jurisdiction

RESOURCES

PARTNERSHIP

INNOVATION

ATTRACTION

IN03 SP businesses and initiatives have effective resources to help them grow, scale and deliver impact

IN04 More value-add, innovation-focused partnerships are developed

IN05 Innovative SP practices relevant to MB are adopted, adapted, and developed in a timely manner

IN06 Innovative SP technologies and businesses are attracted and developed

IN07 More ideas are tested, rapidly, demonstrated, and scaled-up

IN08 SP entrepreneurs and early adopters have the business support they need to succeed

IN09 More SP-focused businesses are advanced more quickly

IN10 More value-add SP partnerships with players outside MB are created

IN11 Idea and knowhow exchange is expanded and valuable cross-sectoral partnerships are established

IN12 Stronger and more trusting indigenous partnerships focused on SP are created

IN13 Early adopted farm-level management practices are supported and rewarded

IN14 SP approaches and benefits are demonstrated and showcased at scale at living labs

IN15 More innovative potential solutions are uncovered, advanced and tested

IN16 MB is able to leverage best-in-class thinking (e.g., circularity) to accelerate SP innovation

IN17 Limited SP resources are focused on the important activities first (e.g., greatest leverage, critical path, etc.)

IN18 Entrepreneurs more readily advance SP activities

IN19 There is a more systematic approach to aligning and adopting prospective innovative SP solutions

IN20 More companies and other organizations are attracted to and engage with MB's SP research and innovation system

IN21 Government incentives (i.e. tax incentives) encourage development and adoption of novel SP approaches

IN08i Adapt and deploy mentoring and support programs focused on advancing SP ventures and activities

IN09i Optimize effective use of accelerator and incubator programs

IN10i Establish strategic SP partnerships with players outside MB

IN11i Develop networks and cross-sectoral partnerships in MB [G]

IN12i Build stronger indigenous relationships focused on SP business opportunities

IN13i Legitimize innovative farm management practices

IN14i Design and support model SP pilot projects

IN15i Design and launch innovation challenge competitions

IN16i Identify, adopt and apply leading sustainability approaches and frameworks

IN17i Establish priority criteria, updated periodically, and apply them to set an innovation agenda

IN18i Establish support mechanisms to increase risk tolerance for advancing SP-specific initiatives

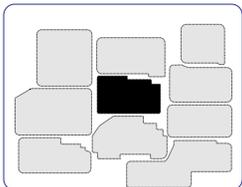
IN19i Implement a structured system to inbound value-add solutions to MB

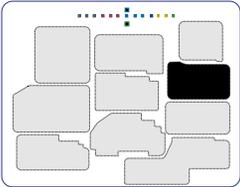
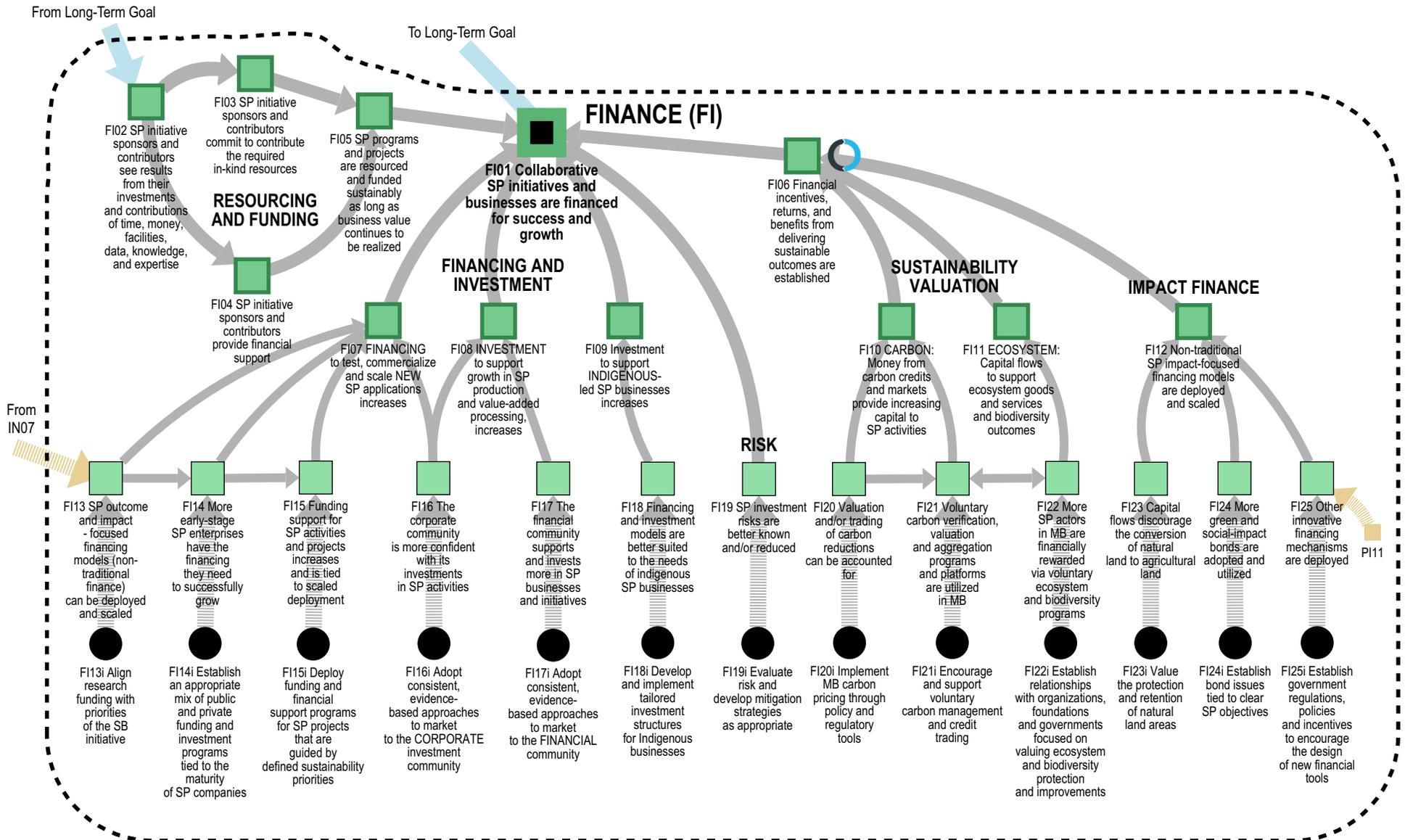
IN20i Strongly promote MB's research and innovation capabilities and assets

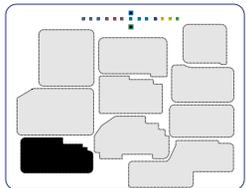
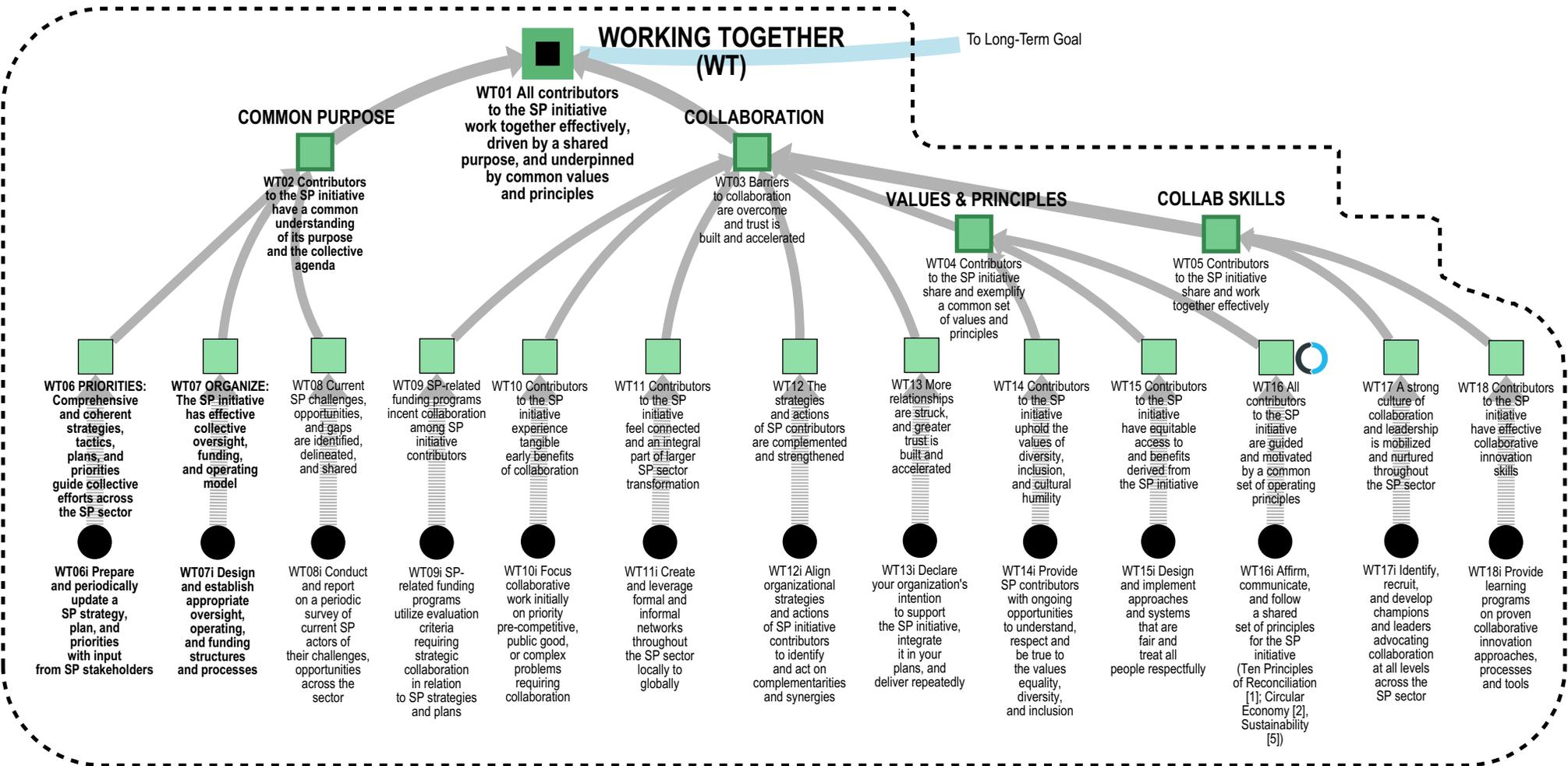
[G] For example between industry, governments, academia, industry and farm groups, innovation institutions

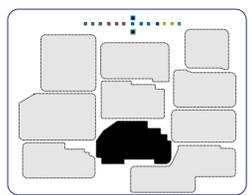
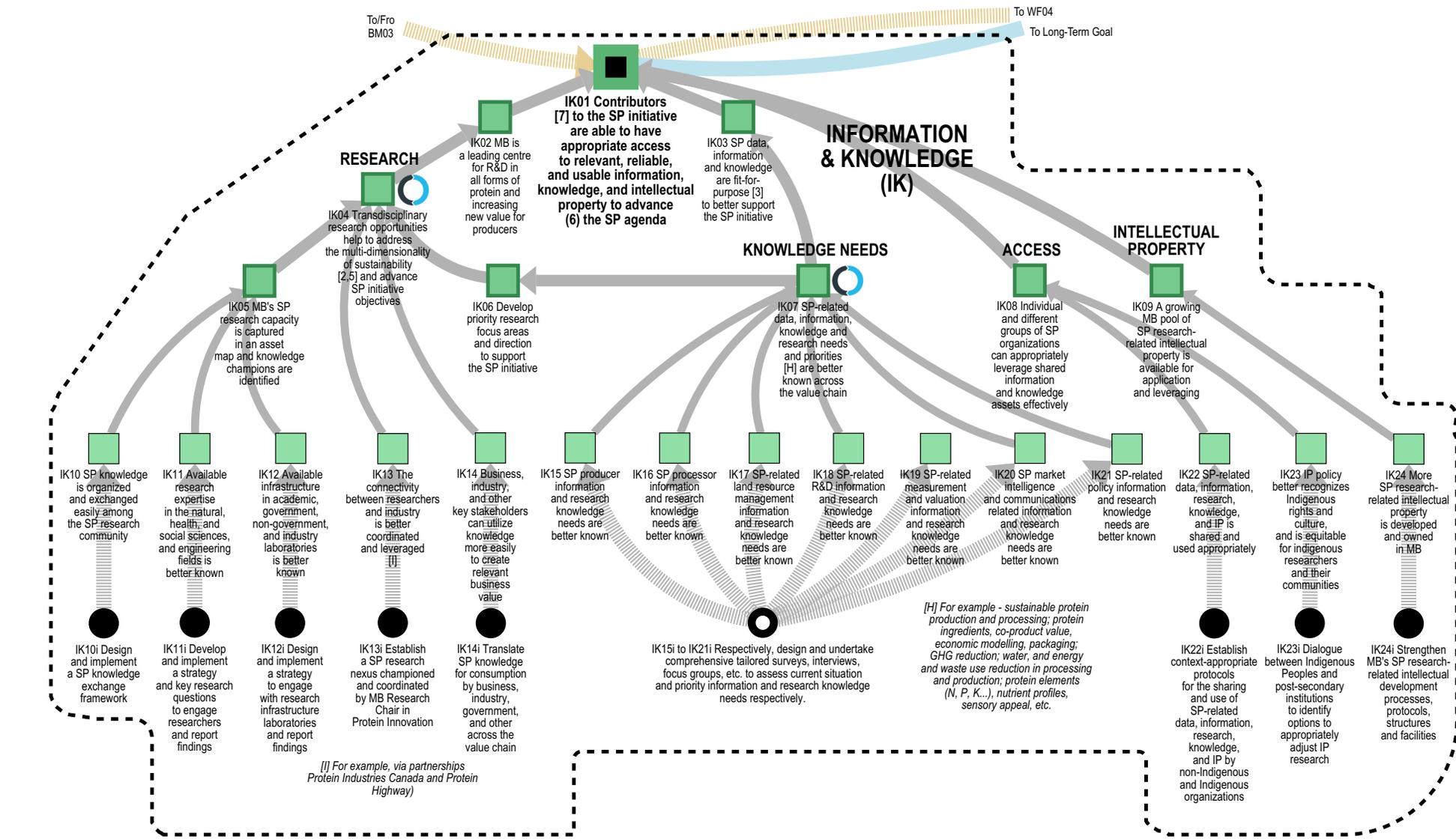
To/Fro FI13

From PI11

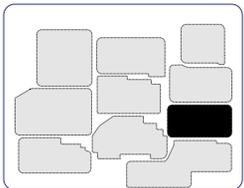
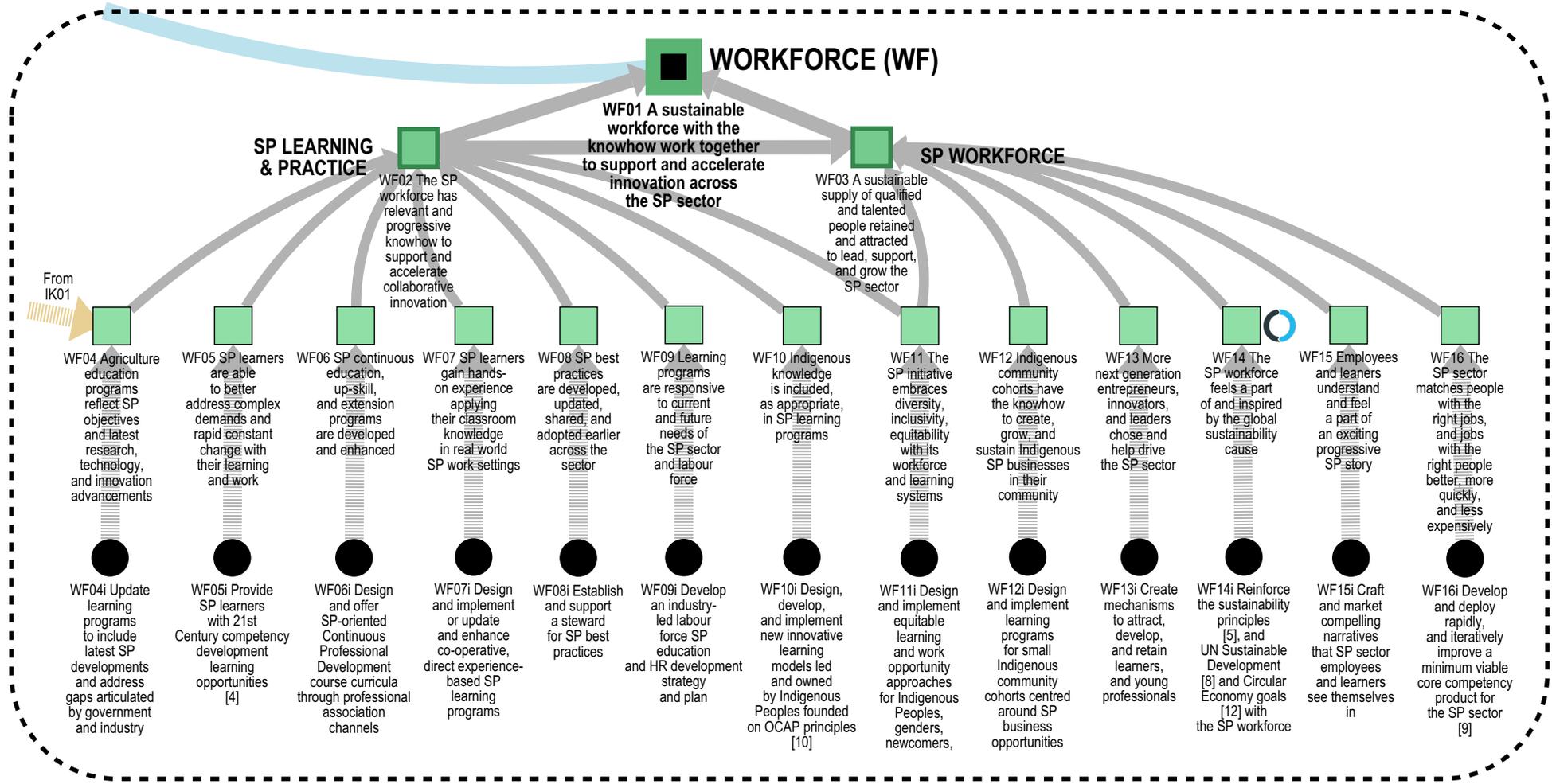




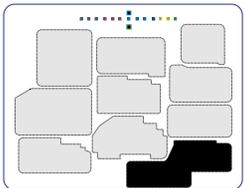
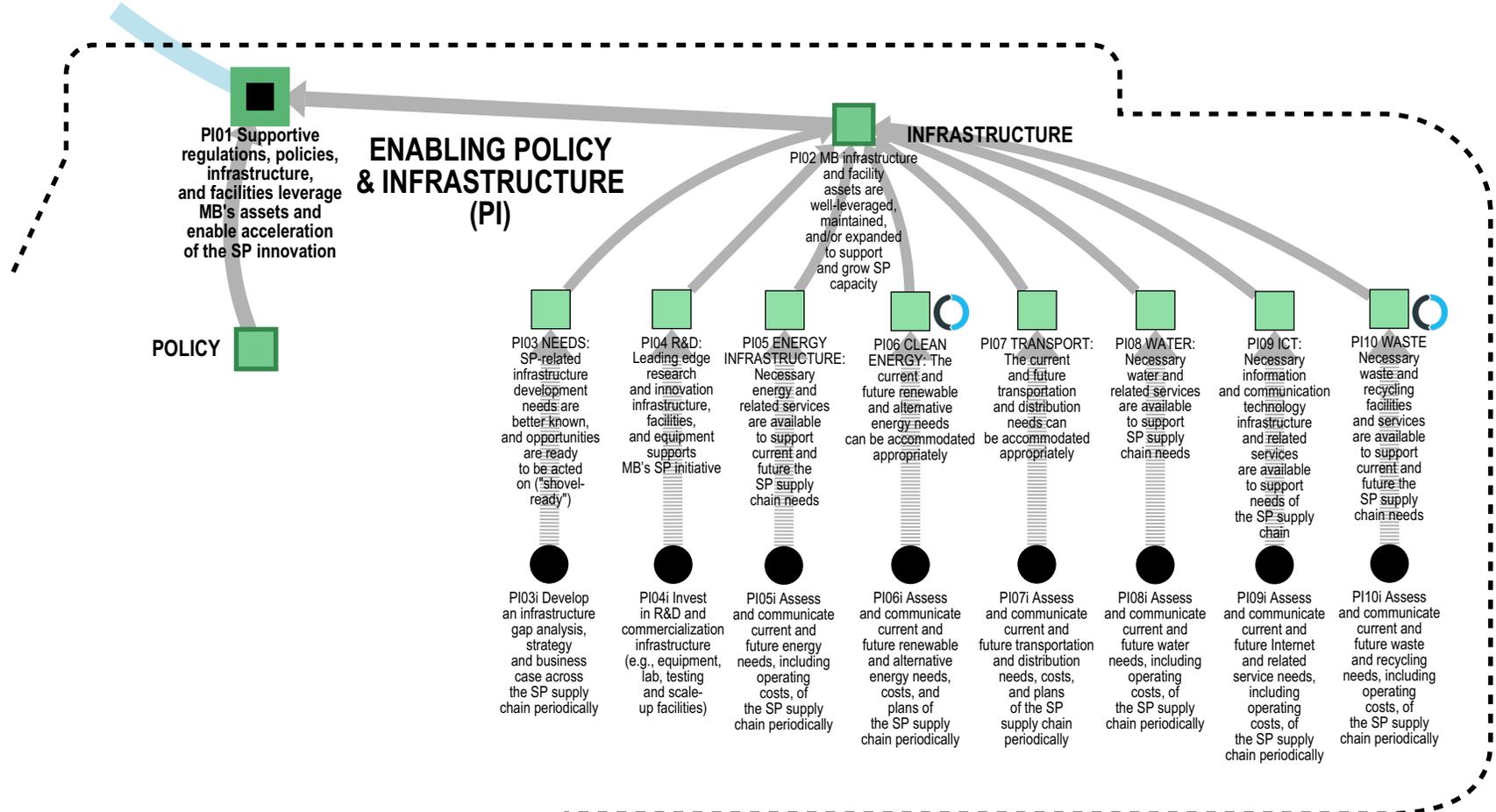


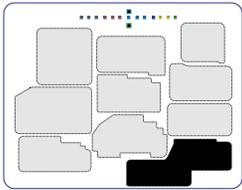


To Long-Term Goal

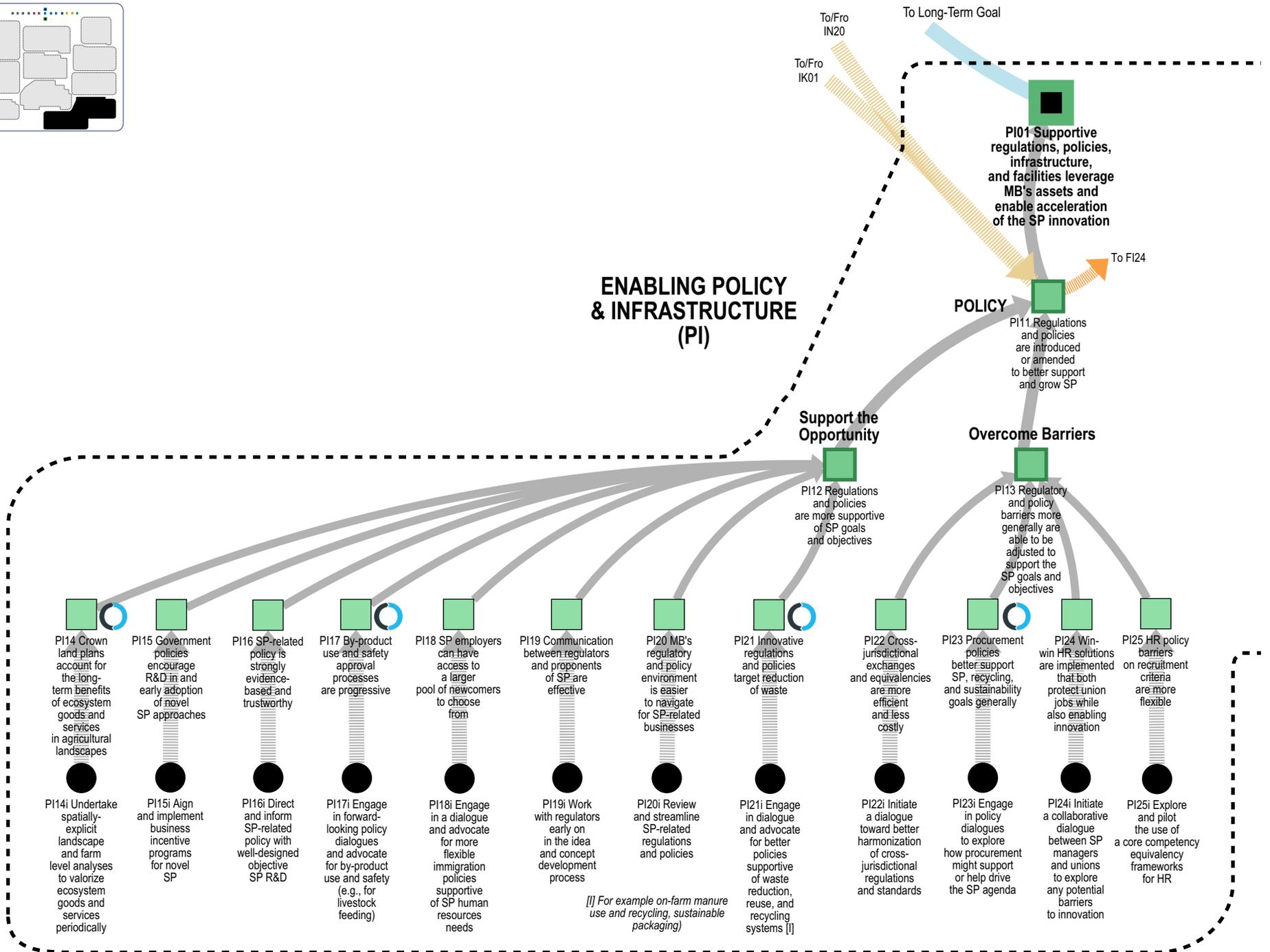


To Long-Term Goal





ENABLING POLICY & INFRASTRUCTURE (PI)



ULTIMATE BENEFIT



BE01 Manitoba proudly leads Canada and the world as an innovative model for high-value sustainable protein that nurtures and benefits all people, the local environment, and the climate

Penultimate Benefits

The Manitoba Brand



BE02 MB is regarded as a sustainability leader – in Canada and globally - and is a sustainable protein supplier of choice



BE03 Public knowledge of and trust in the agriculture and food sector is greater



BE04 MB contributes to UN Sustainable Development Goals

Economic



BE05 MB is globally competitive and secures new customers and markets



BE06 MB's economy grows with increased profitability, new business creation, and increased high-value direct and indirect jobs



BE07 MB attracts and secures new talent

Social



BE08 MB communities are more resilient and vibrant



BE09 MB's agriculture and food workplace is safe and healthier for employees



BE10 Reconciliation with Indigenous Peoples is advanced

Consumers



BE11 Consumers benefit from having a trusted and healthy food producer

Climate Change Mitigation / Adaptation



BE12 GHG emissions are reduced and carbon sequestration is maximized



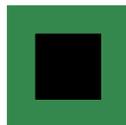
BE13 MB is better able to withstand water-related climate change impacts

Local Environment

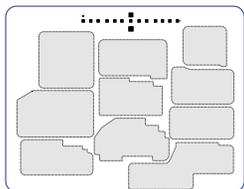


BE14 The local environment is strengthened with enhanced ecosystem services, improved biodiversity, improved water quality, and reduced waste

LONG-TERM GOAL



LTG01 Through strengthened collaboration and accelerated innovation, Manitoba realizes its collective and equitable potential to produce protein that is diverse, high quality, healthy and increasingly sustainable



SUSTAINABLE PROTEIN SUMMARY DOCUMENT

A COLLABORATIVE ACTION FRAMEWORK

**INVEST.
BUILD.
GROW.**
MANITOBA



Functional Area (FA)	FA Target Outcome
Sustainable Protein Industry (SP)	Manitoba produces quality, diverse and increasingly sustainable protein (SP01)
Measurement, Monitoring & Verification (MMV)	Manitoba and individual actors in the SP system measure, report, and value respectively their collective and individual sustainable protein activities and make adjustments accordingly (MMV01)
Soil, Ecosystems & Biodiversity (SE)	Manitoba's agriculture's soils, ecosystems, animals, and biodiversity provide ecosystem goods and services; are healthy, resilient and productive (SE01)
Innovation (IN)	Innovation delivers more impactful SP activities and grows globally competitive innovative enterprises (IN01)
Finance (FI)	Collaborative SP initiatives and businesses are financed for success and growth (FI01)
Branding, Communication & Marketing (BM)	A strong, sustainable protein brand distinguishes Manitoba products, builds trust, inspires action and creates value (BM01)
Working Together (WT)	All contributors to the SP initiative work together effectively, driven by a shared purpose, and underpinned by common values and principles (WT01)
Information & Knowledge (IK)	Contributors to the SP initiative are able to have appropriate access to relevant, reliable, and usable information, knowledge, and intellectual property to advance (b) the SP agenda (IK01)
Workforce (WK)	A sustainable workforce with the knowhow work together to support and accelerate innovation across the SP sector (WK01)
Enabling Policy & Infrastructure (PI)	Supportive regulations, policies, infrastructure, and facilities leverage MB's assets and enable acceleration of the SP innovation (PI01)

Accelerating Innovation to Realize Manitoba's Impact Potential



Manitoba Protein Advantage Strategy

Developed under the guidance of Manitoba Agriculture and Resource Development and the Manitoba Protein Consortium.

March 2021 ver.

Members of the Design Team

This Strategy was co-created through the generous contributions of a diverse Design Team:

Chris Anderson - *Protein Industries Canada*

Dominique Baumann - *Roquette*

Sav Bellissimo - *Federated Co-op Ltd.*

Carson Callum - *Manitoba Beef Producers*

Tim Faveri - *Maple Leaf Foods*

Bruce Hardy - *Myera Group*

Wayne Hiltz - *Manitoba Chicken Producers*

Jim House - *University of Manitoba*

Marcel Joaquin - *IQdigitec Inc.*

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Susie Miller - *Canadian Roundtable for Sustainable Crops*

Duncan Morrison - *Manitoba Forage & Grasslands Association*

Lee Anne Murphy - *Protein Highway*

Henry Rowlands - *Detox Project*

Denis Tremorin - *Pulse Canada*

David Weins - *Dairy Farmers of Manitoba*

Robin Young - *Food Development Centre*

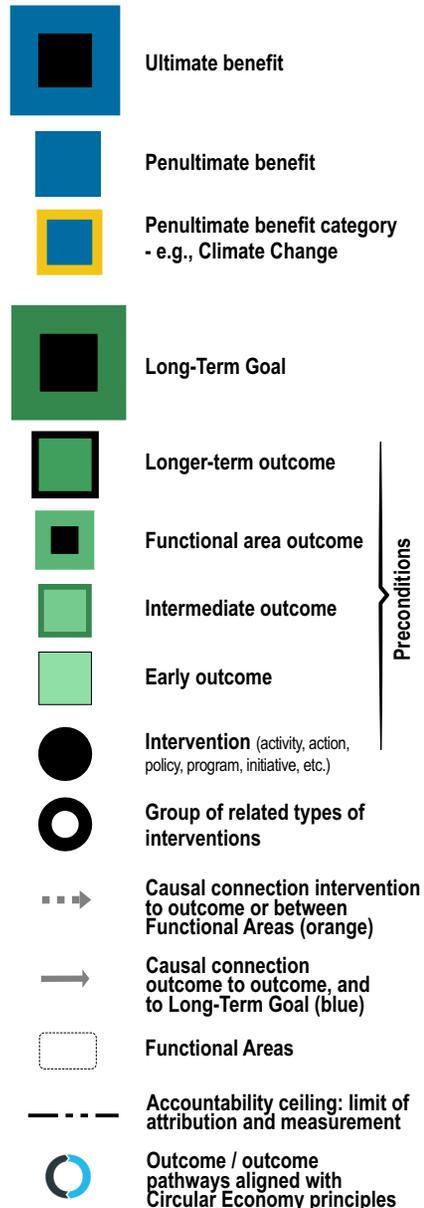
Consulting led by
Sustainable Growth Co.
www.sustainablegrowth.ca

Outcome Mapping led by
R. Keith Jones & Associates

Challenge Dialogue System® (CDS)
www.challengedialoguesystem.net

This Collaborative Outcome Change Framework used
Theory of Change methodology
and *Kumu* online system mapping software

Legend



Important Definitional Notes

SP - Sustainable Protein (as in Initiative/ Sector / System including often the closely associated agriculture and food system / sector)

[1] Principles of Reconciliation as described in "What We Have Learned - Principles of Truth and Reconciliation (pp3-4), 2015. Truth and Reconciliation Commission of Canada.

[2] Circular Economy principles: A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

[3] Fit-for-purpose means tabular, spatial, meta and are forms of information and knowledge that are relevant, authoritative, complete, accurate, integratable, inoperable, and affordable.

[4] 21st Century competencies involve the ability to meet complex demands, thrive in a world where change is constant and continuous learning draws on many different complementary of skills such as: learning - critical thinking, creativity, collaboration, innovation, self-direction, accountability, and communication; literacy - digital information, media, technology; and life skills - flexibility and adaptability, leadership, initiative, productivity, and social skills and cross-cultural interaction.

[5] Sustainability strives to attain balance across four dimensions: (a) place minimal pressure and impact on the environment; (b) promote all aspects of an individuals health and well being; (c) be accessible and culturally acceptable; (d) be economically viable and affordable (source FAO, WHO).

[6] For example, to inform, advance, and communicate policies, practices, research, innovative enterprise, industry, marketing, measurement and valuation, consumers, and the public.

[7] For example, indigenous people with traditional knowledge, scientists and researchers, analysts, marketers, practitioners, policy-makers, communicators, management-planners, etc.

[8] UN SDG goals, and in particular #4 - Quality Education; #5 - Gender Equality; #8 - Decent Work and Economic Growth; #10 - Reduced Inequalities; and #16 - Peace, Justice, and Strong Institutions.

[9] This intervention and outcome draw on the Conclusions - Other Considerations section of a 2017 report titled "Matchup: A Case for Pan-Canadian Competency Frameworks" by the Canada West Foundation.

[10] OCAP™ principles are complied with regarding the right of First Nations to own, control, access, and possess information about their peoples.

