

TALLER DE ESPACIO Y CIUDAD

DISEÑO SISTÉMICO

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Pedro Garreton

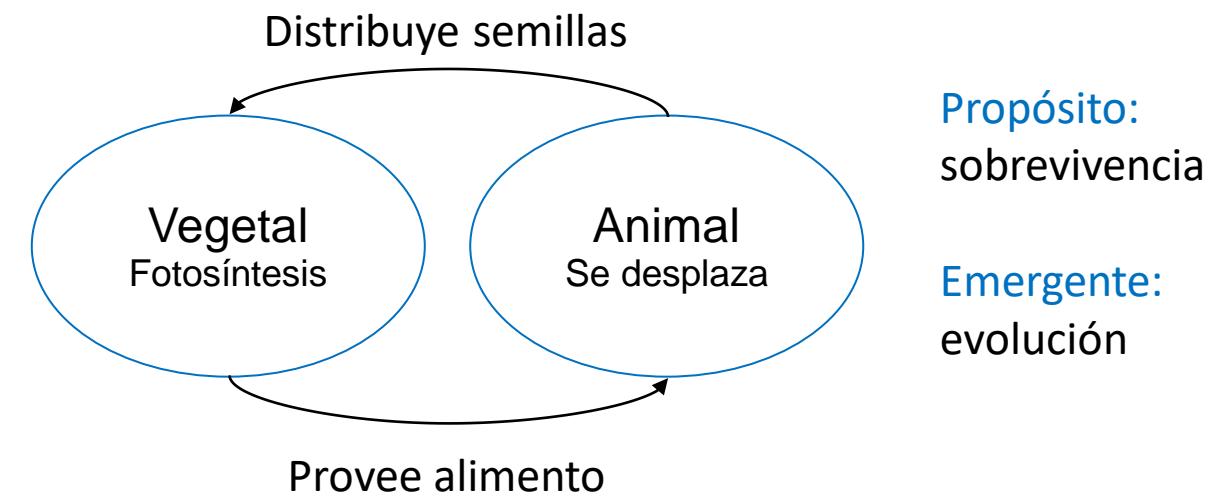
Jose Manuel Gomez

Sistema:

- Entidades que interactúan formando un conjunto cohesionado.
- Tiene un propósito, composición (entidades), estructura (interacciones) y entorno (fronteras espaciales y temporales)
- Un sistema puede ser una entidad de un sistema mayor, dependiendo de la escala de análisis (ej: persona → sociedad)
- El valor de un sistema puede ser mayor al de la suma de sus partes, cuando existen efectos sinérgicos o comportamientos emergentes (ej: actividad neuronal → conciencia)

Representación sistémica:

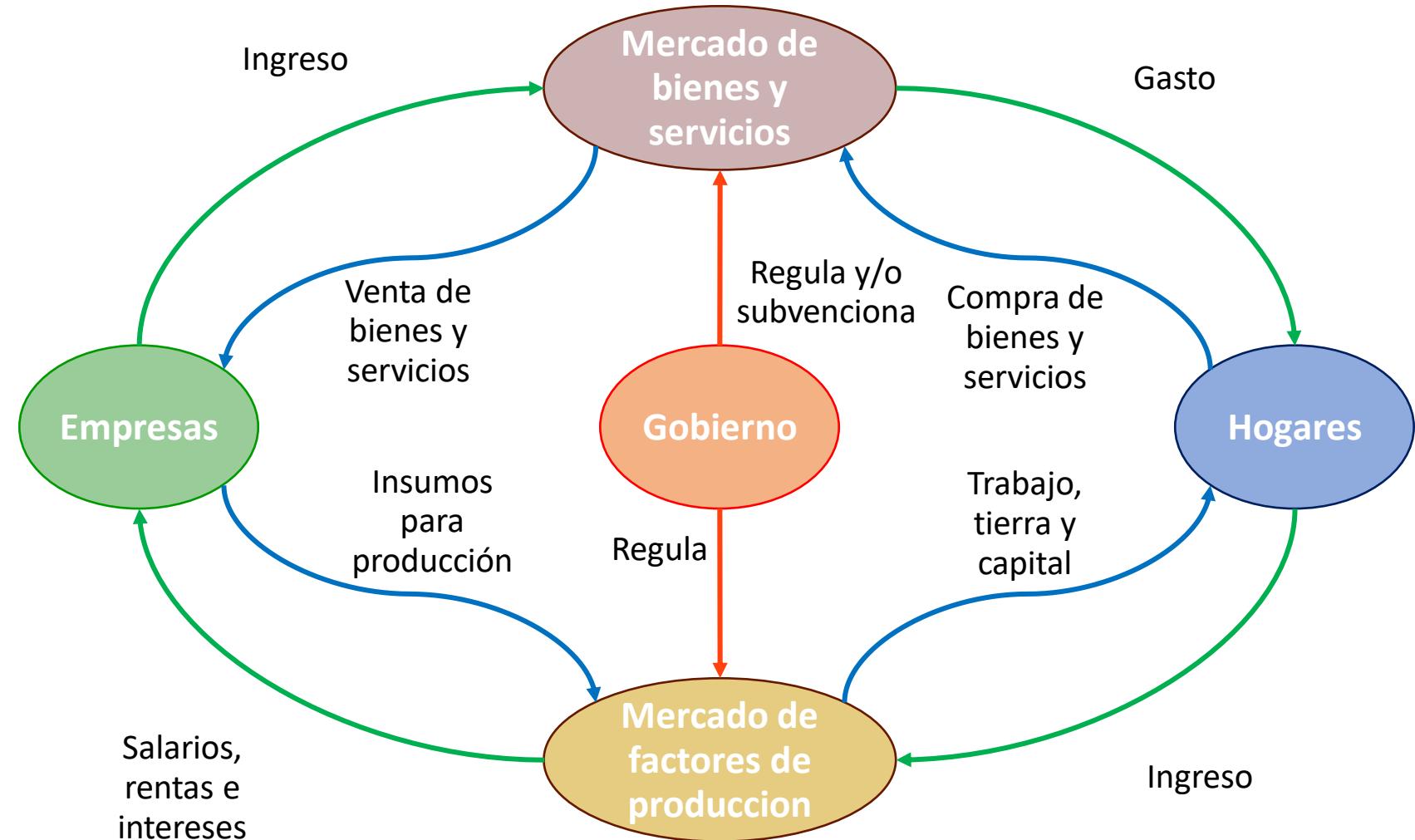
- Partes o entidades: nodos con identidad y función
- Interacciones: líneas con descripción de relaciones



Economía

Propósito:

Emergente:

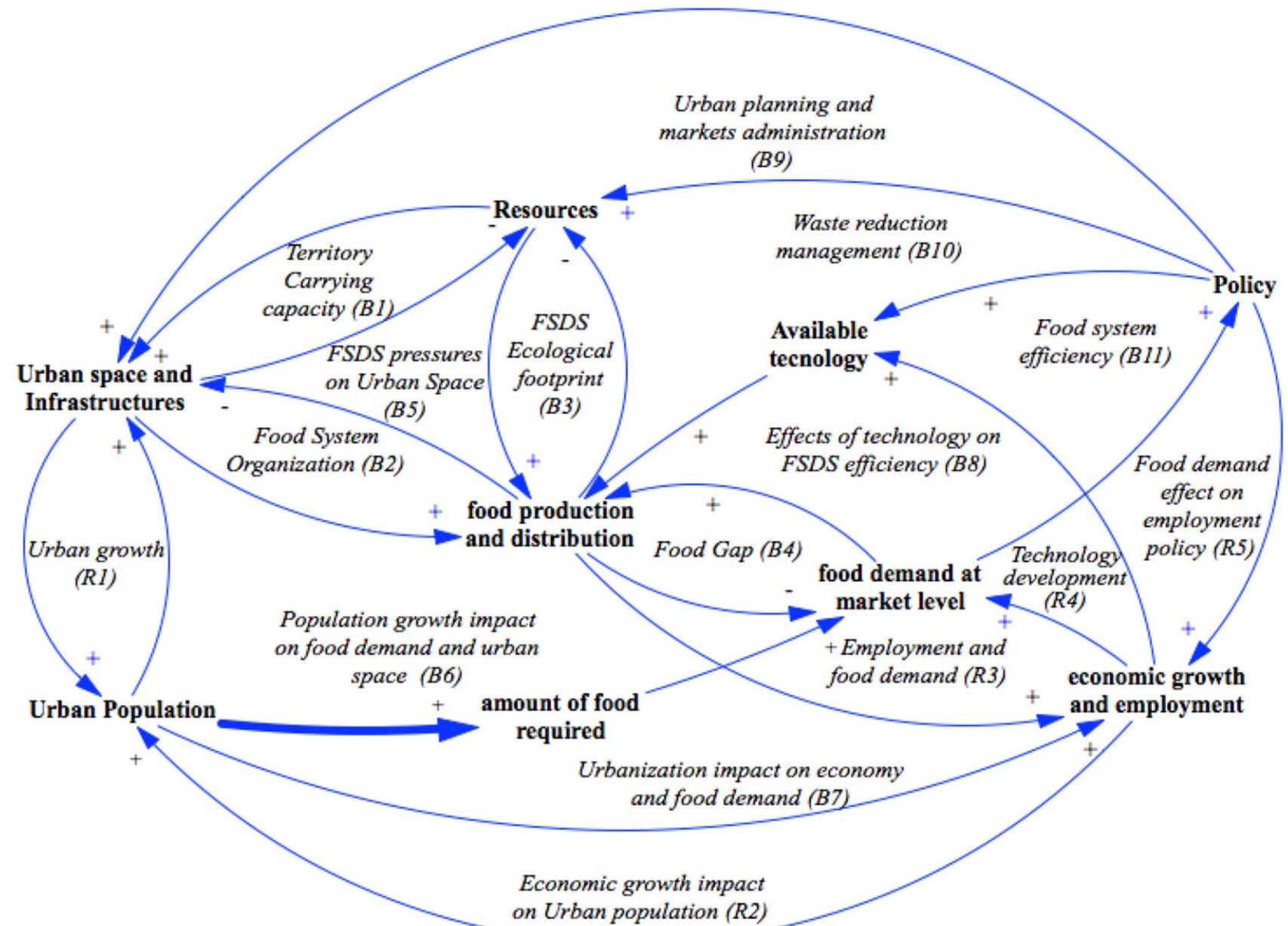


Agricultura

Propósito: Alimentar a la humanidad

Emergente:

Mejora de calidad de vida



Intervención en
Afganistán

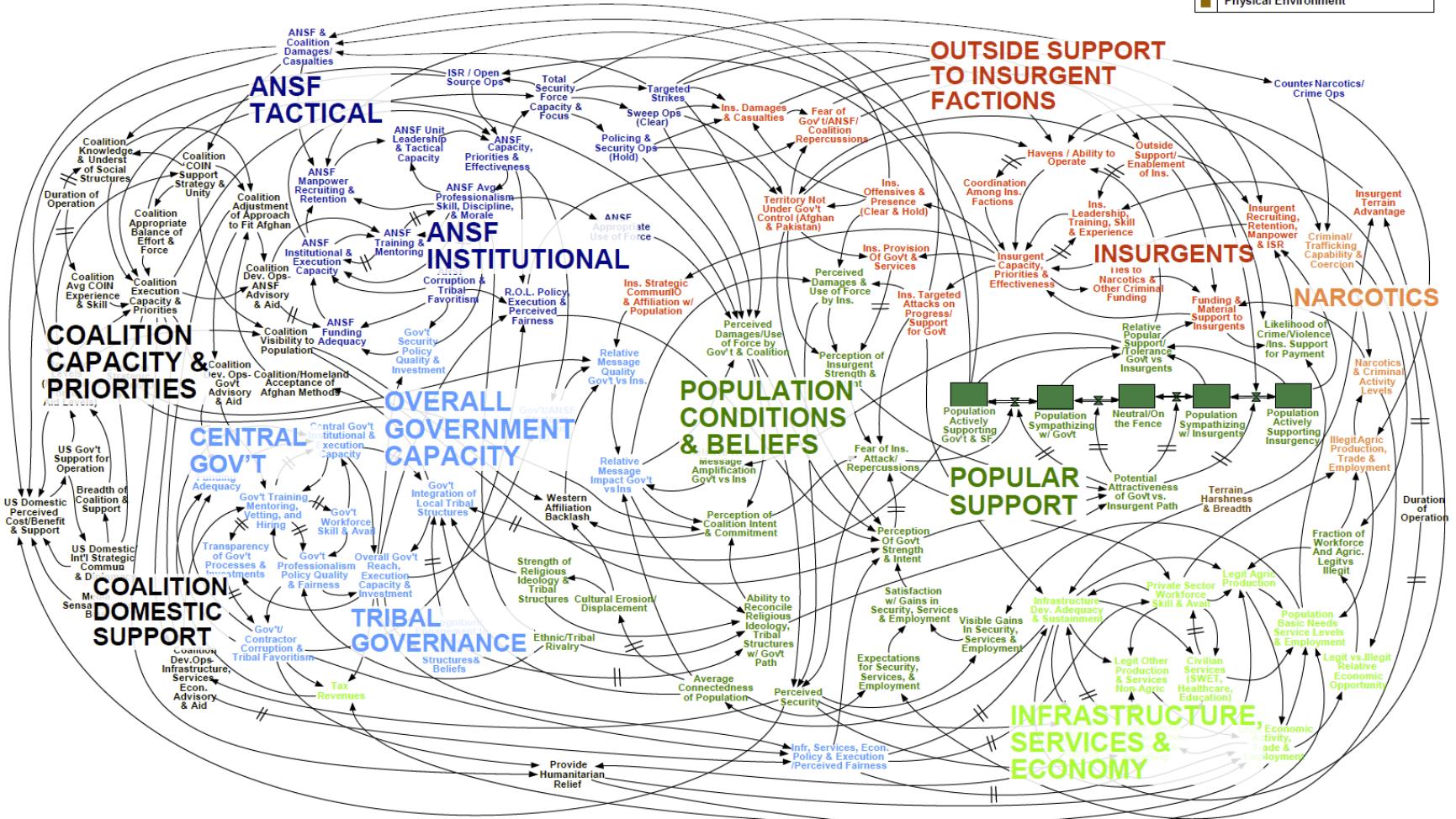
Propósito:
¿Derrotar al
terrorismo?

Emergente:
¿Paz mundial?

Afghanistan Stability / COIN Dynamics

 = Significant Delay

Population/Popular Support
Infrastructure, Economy, & Services
Government
Afghanistan Security Forces
Insurgents
Crime and Narcotics
Coalition Forces & Actions
Physical Environment

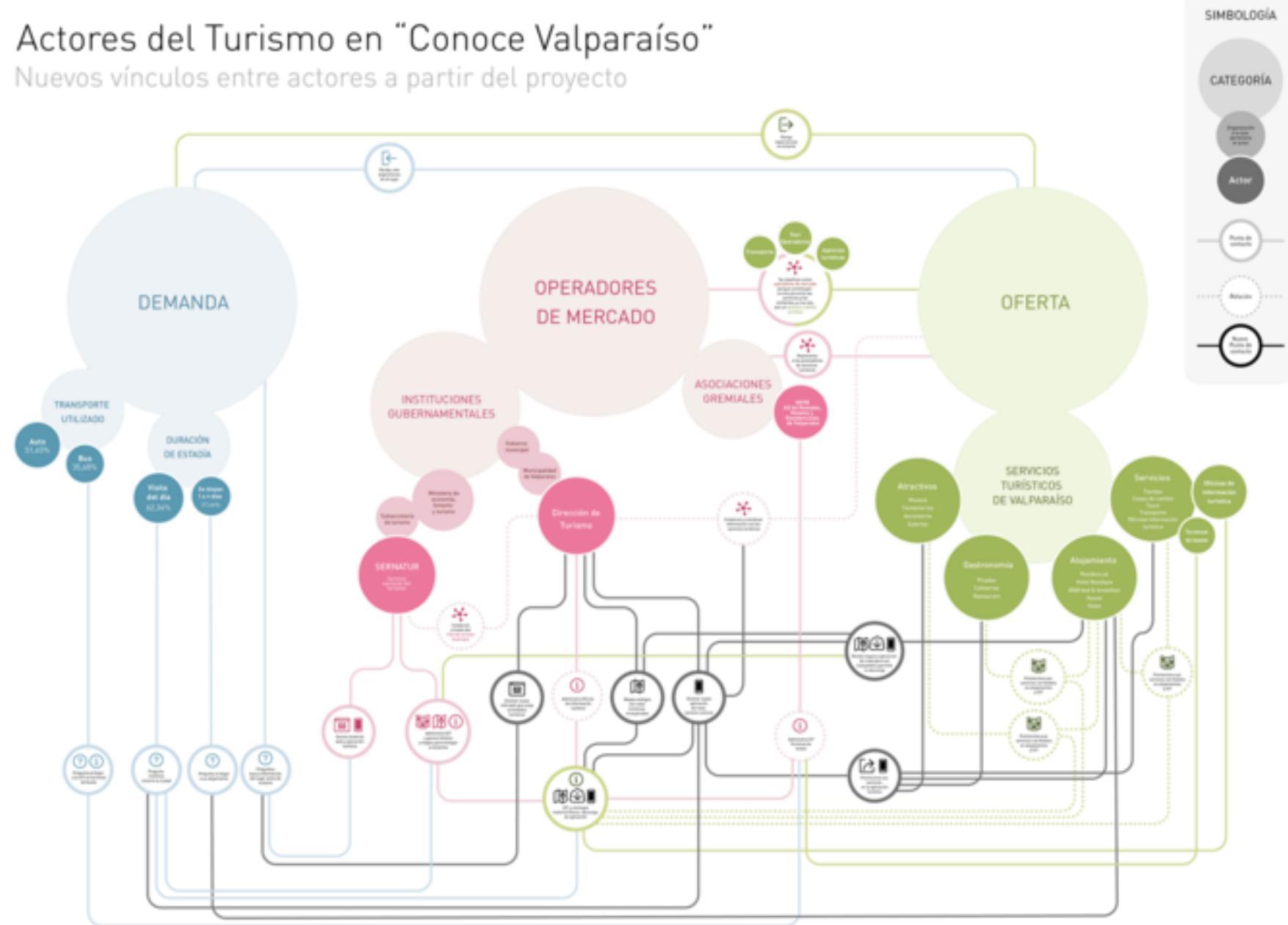


WORKING DRAFT - V3

MAPA DE ACTORES

Actores del Turismo en "Conoce Valparaíso"

Nuevos vínculos entre actores a partir del proyecto

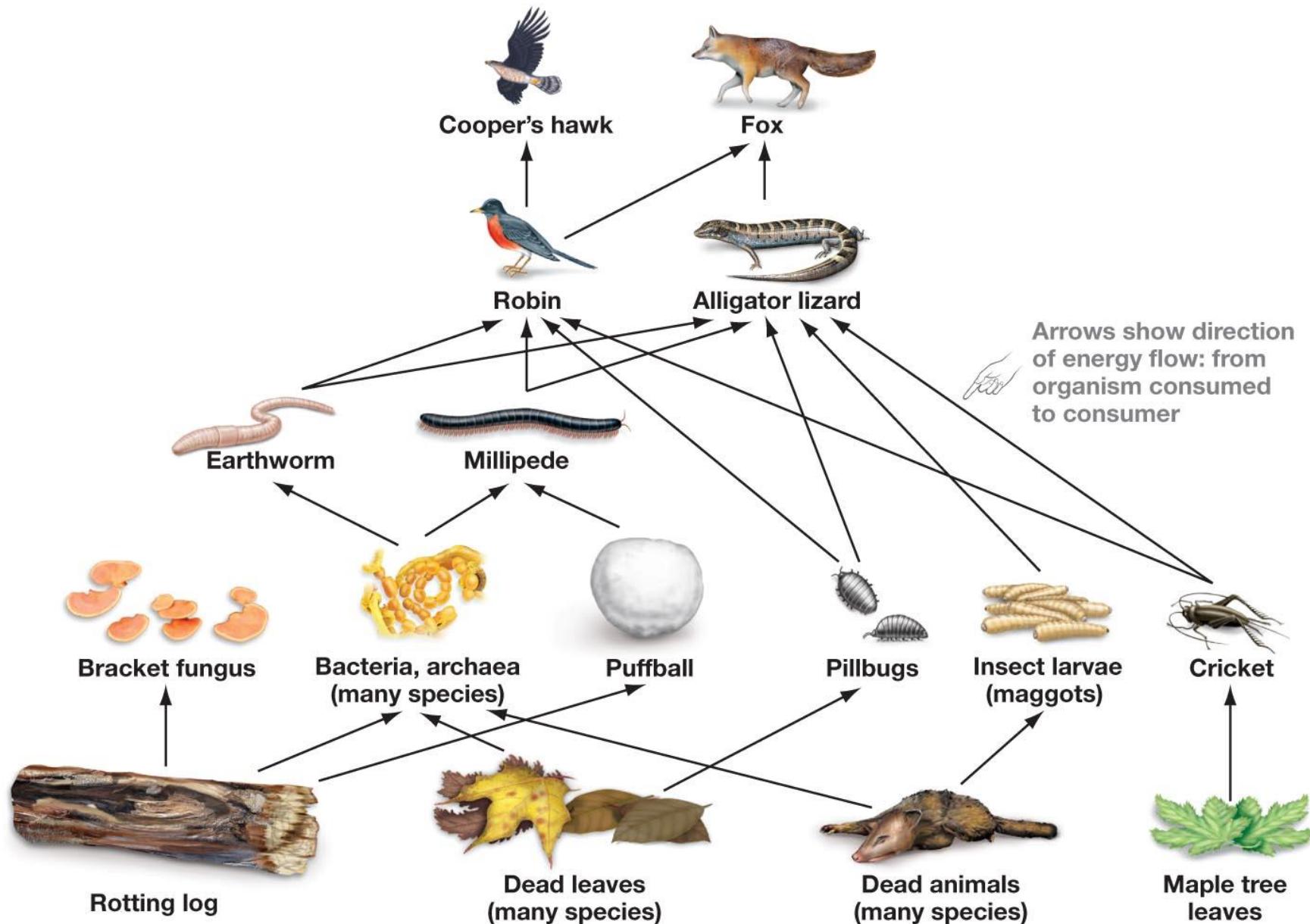


MAPA DE ACTORES

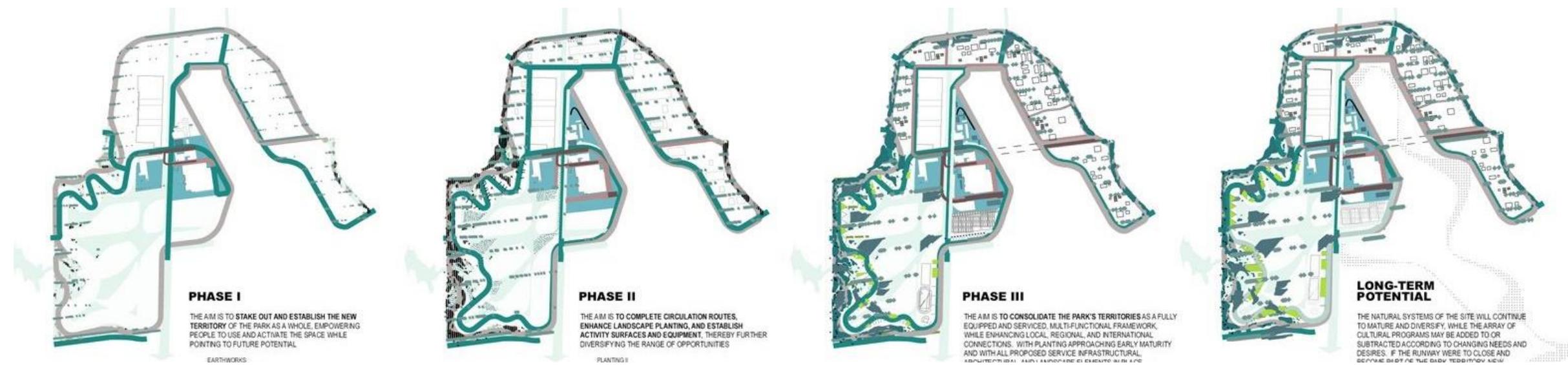
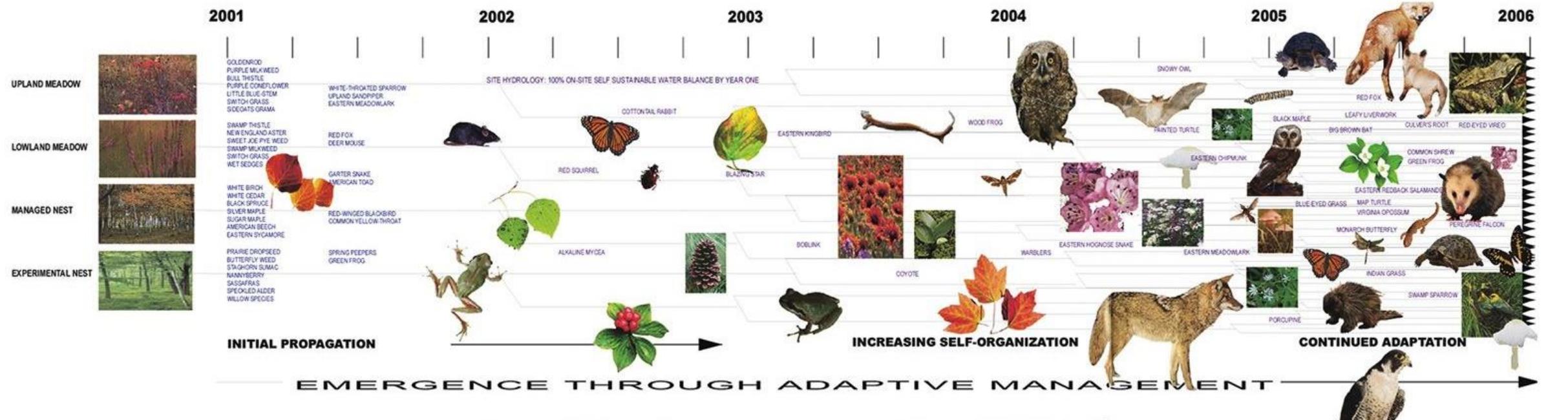
**CONSTRUCTION JUNCTION
STAKEHOLDER MAP**



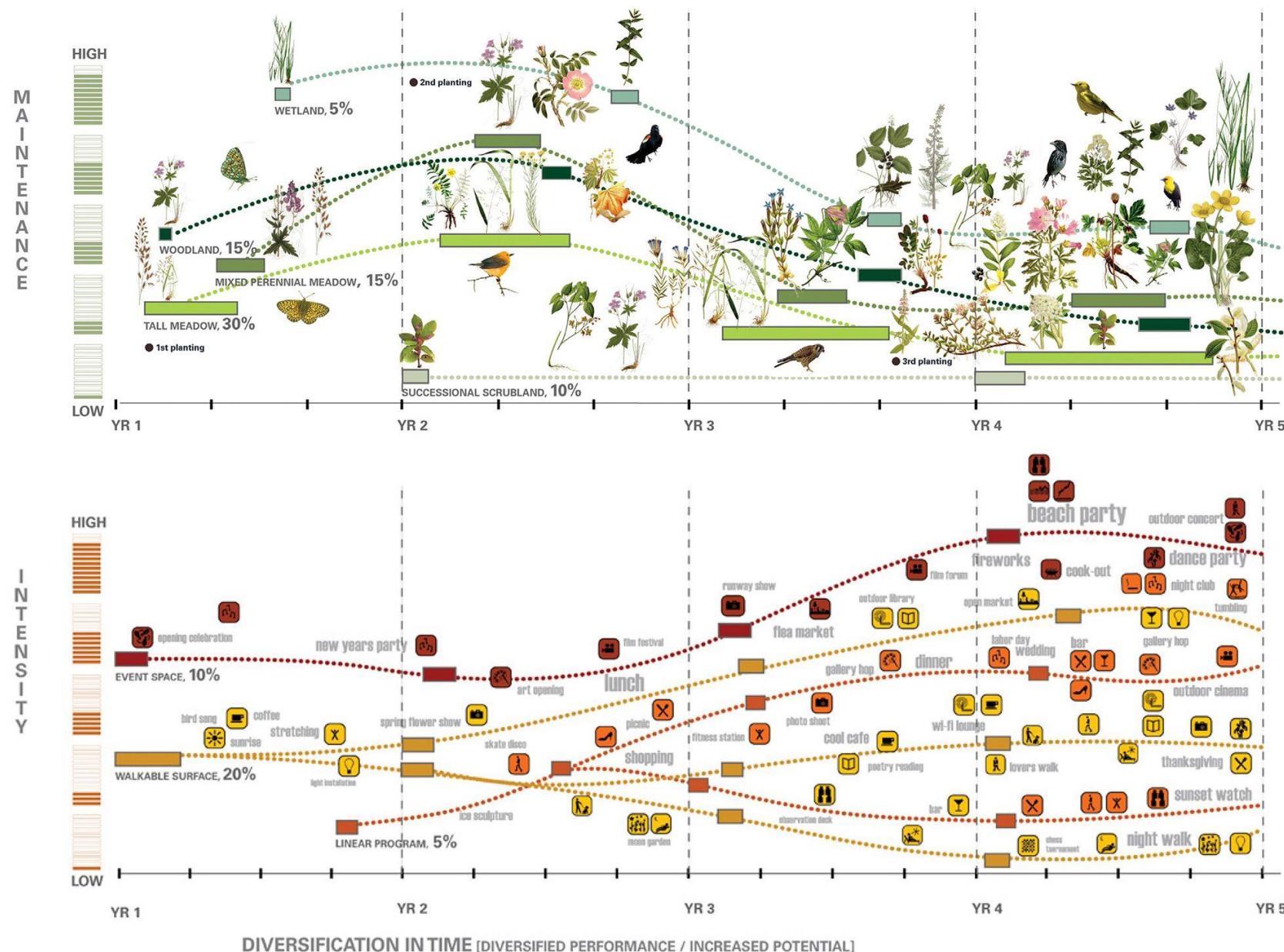
PIRAMIDE ALIMENTARIA EN ECOSISTEMA



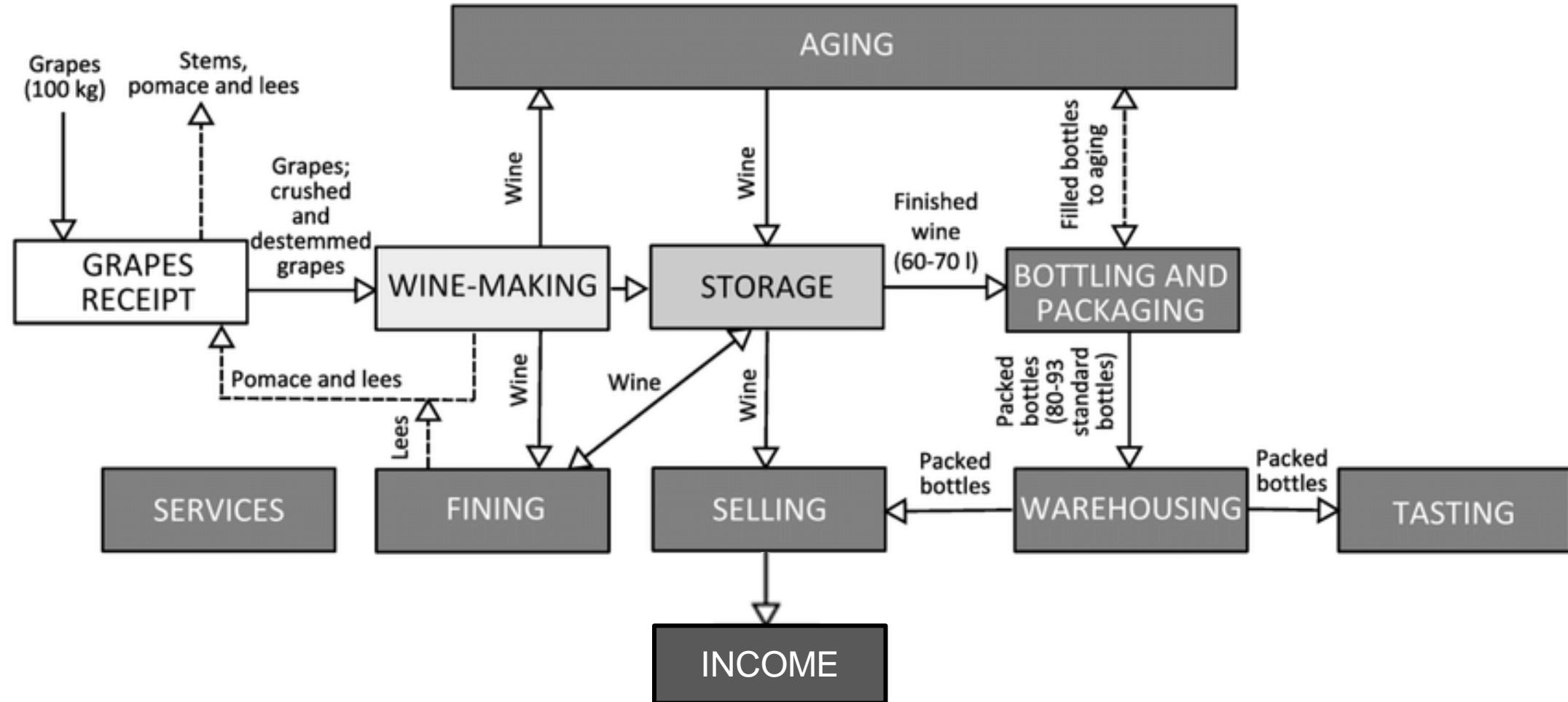
INCREMENTO DE BIODIVERSIDAD

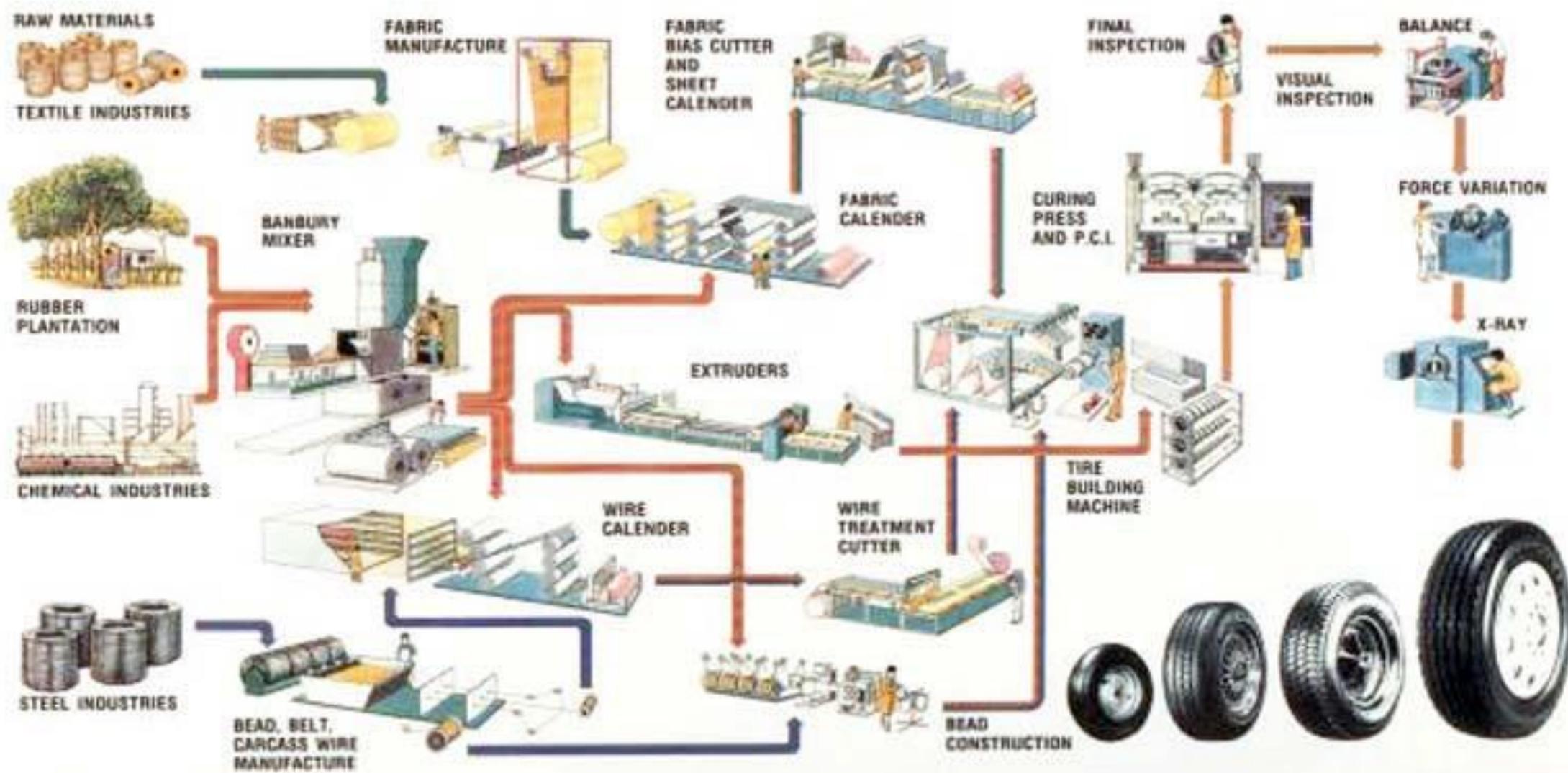


DIVERSIFICACION PROGRESIVA



Producción de vino

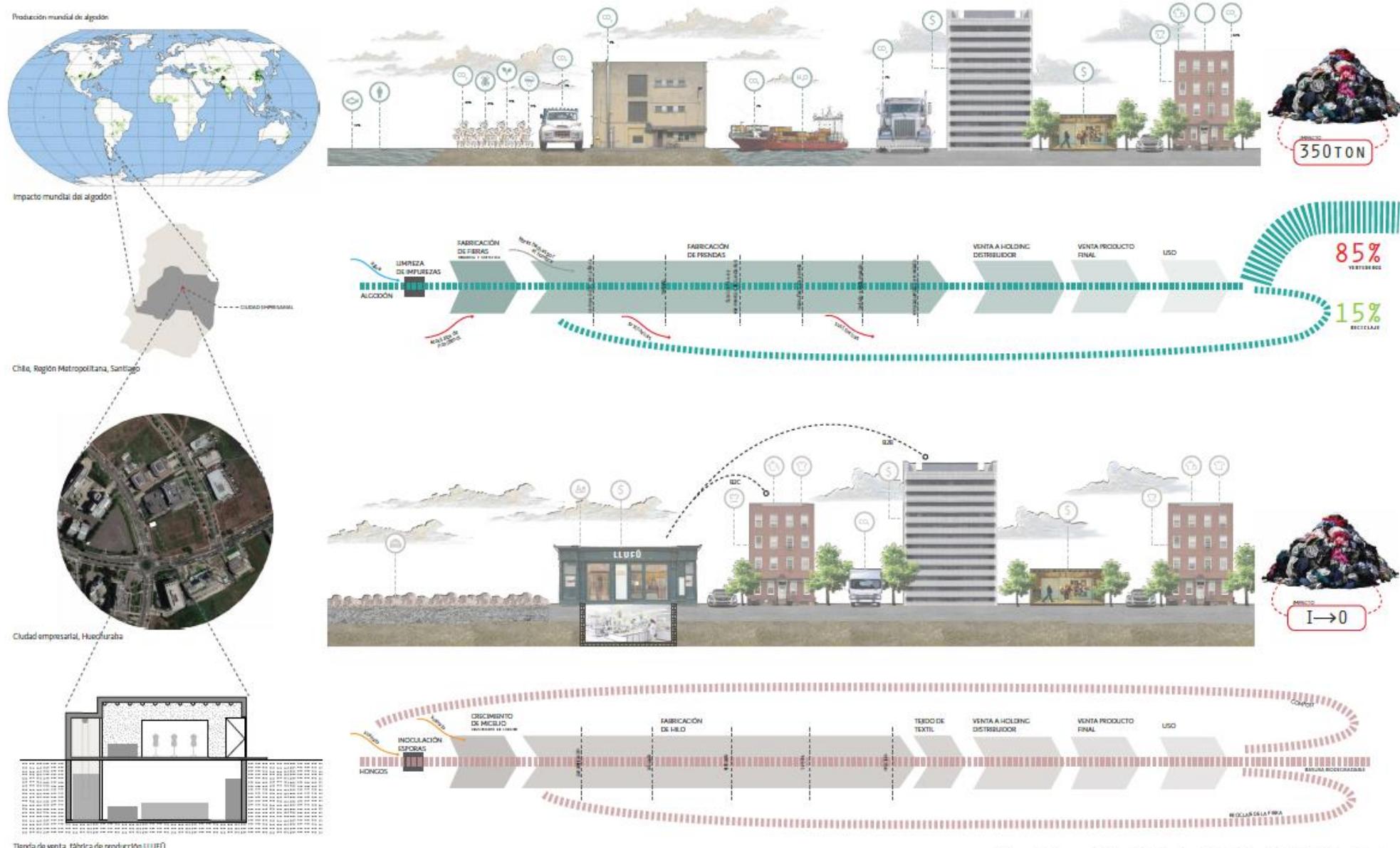




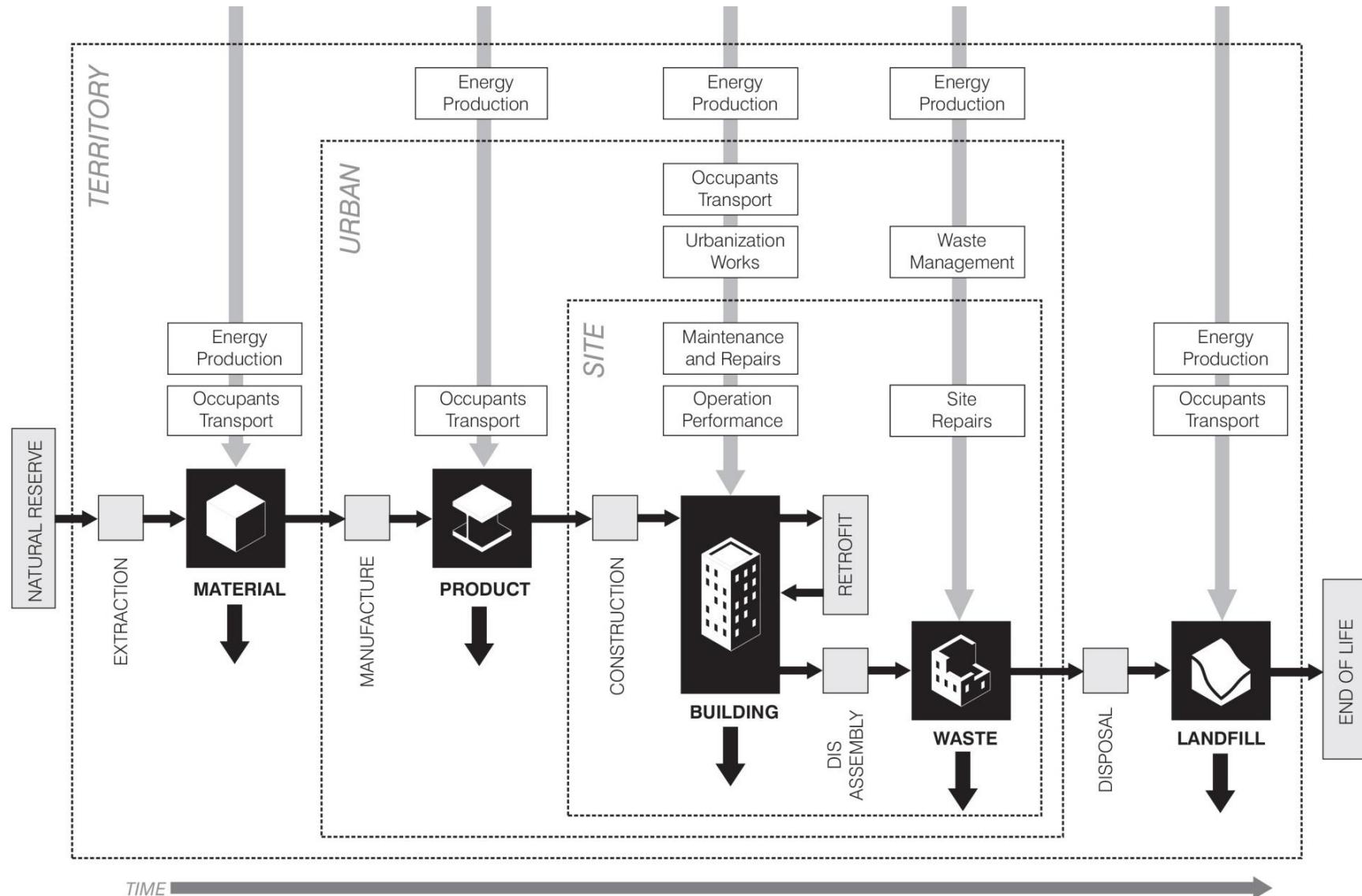
PROCESOS MULTIESCALARES

LLUFU - Florencia Moyano

ESCALA TERRITORIAL: Interacciones territoriales

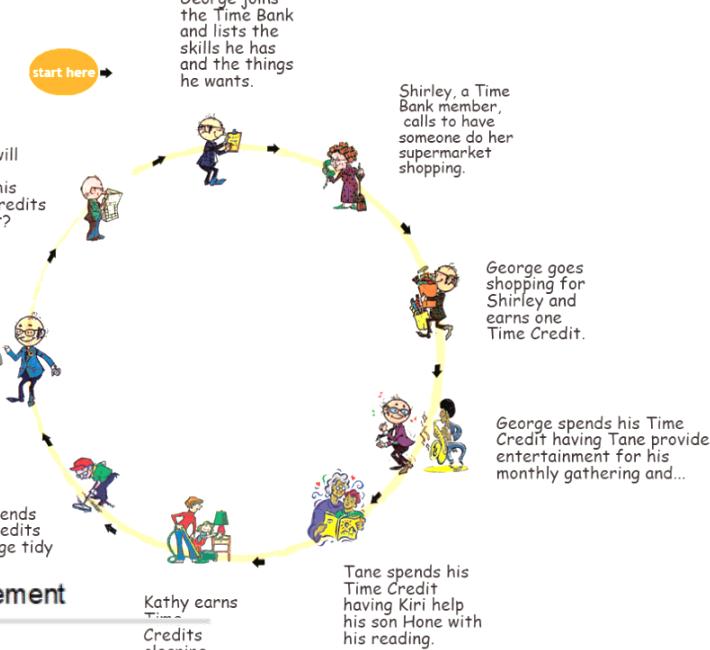
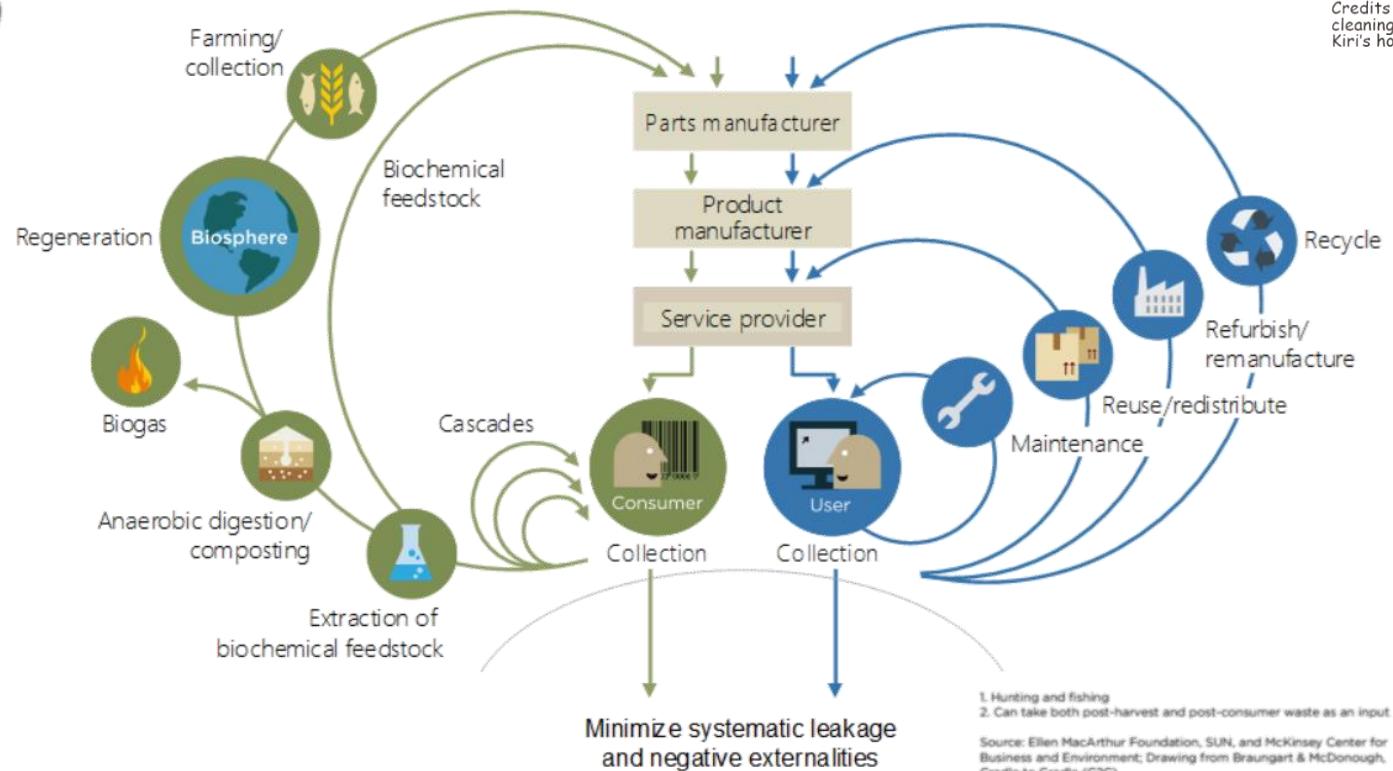
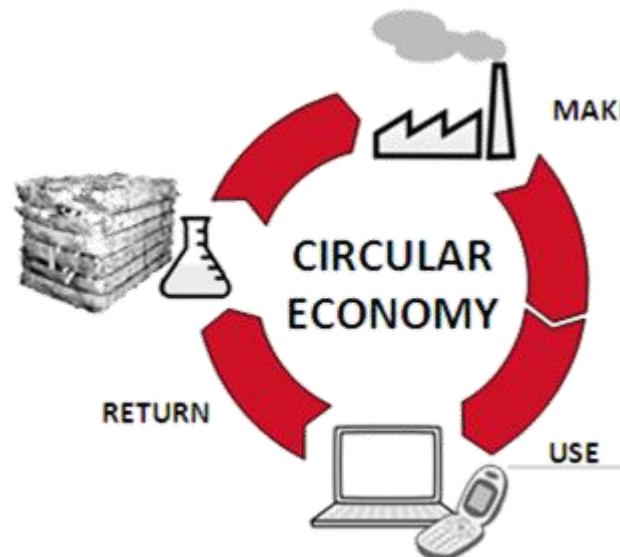


IMPACTOS MULTIESCALARES



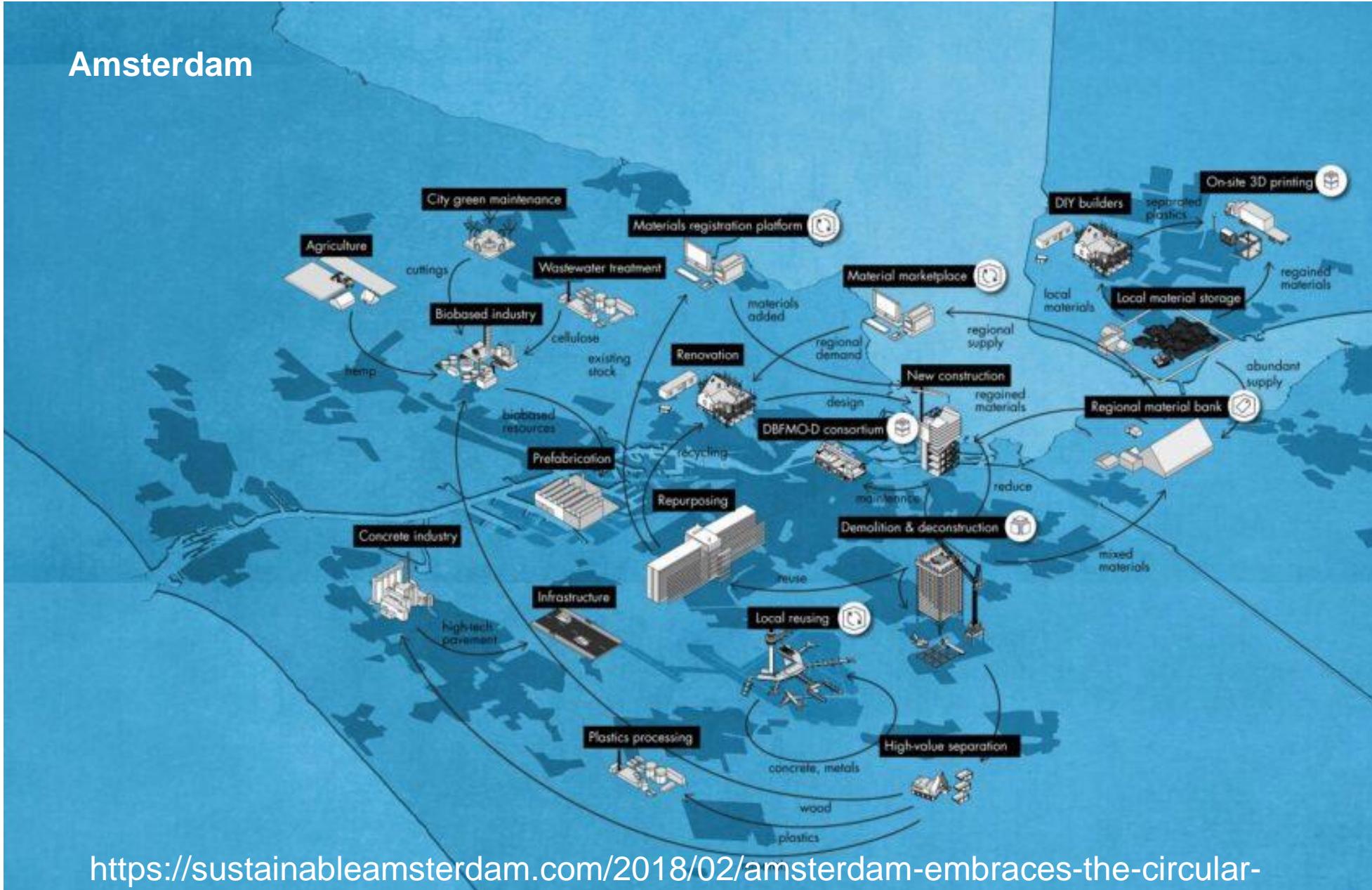
Expanded temporal and spatial energy boundaries in design.

ECONOMIA CIRCULAR



Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

Amsterdam



<https://sustainableamsterdam.com/2018/02/amsterdam-embraces-the-circular-economy/>

Principios para construir, proliferar e interconectar ciudades:

- La ciudad está compuesta por partes estandarizadas organizadas en una matriz
- La ciudad se organiza por principios generales determinados social, cultural y políticamente
- La ciudad es un sistema de flujos cambiantes que interactúan en un modelo genérico
- La ciudad se adapta a condiciones topológicas, climáticas y culturales locales

BUILDINGS



THE BASILICA is a flexible building used for gatherings and commercial transactions. It is commonly located adjacent to the forum, and it is intended to house market activities during inclement weather. Due to its flexibility, the basilica is easily appropriated by Christians for their liturgical needs.



THE CAPITOLIUM is the temple of state religion. Dedicated to the Capitoline Triad (Jupiter, Juno, and Minerva), the capitolium is easily identified by its tripartite plan, in which each cella houses a cult statue. Only cities swearing an allegiance to Rome have a capitolium, and therefore, it is an indicator of Romanness.



TEMPLA are religious buildings dedicated to the veneration of gods, the Imperial family, and native cults. The templum is the official “residence” of a god or emperor within a particular city and therefore has no interior function other than the display of statuary and ritual sacrifice. The Roman templum is “usually in the middle of the city, integrated into the center of religious, political, and economic life.”



THE THEATRUM is a building dictated by an Imperial edict which requires games in honor of the Capitoline Triad. The theatrum is used for the presentation of games and performances, although not comedies and pantomime acts, which are reserved for the amphitheater.



THERMAE are baths. They provide an important public service to the city (hygiene) as well as an important space for socializing, political brokering and business transactions.

MONUMENTS



THE ARCUS is a monument used to commemorate a military or legislative victory. Arches are usually located in prominent locations in the city, such as flanking the capitolium at the head of the forum (as in Pompeii) or at the intersection of the cardo and decumanus (as in Jerash).



THE COLUMN has a similar function to that of the arch, as it is primarily used for commemorative purposes in a prominent urban location.

PLANNING



CARDO ET DECUMANUS are the primary perpendicular axes which define the geographical and spiritual center of the city. Cardo is the Latin word for “hinge,” which indicates its cosmological significance as “the ideal line on which the sky seem(s) to swing.” The rite of establishing the cardo and decumanus is performed by a magistrate who determines the center of the new city according to solar orientation.



CENTURATIO is the process of “gridding” for agricultural purposes and establishes an inseparable connection between the city and its surrounding landscape.



THE FORUM is a centrally located outdoor space intended for the exchange of goods and services, as well as the main public social space in the city. Many of the main public buildings (particularly the capitolium, basilica and tempла) are directly adjacent to the forum, thereby establishing a close relationship between commerce and governance.

INFRASTRUCTURE



AQUAE DUCTUS is the infrastructure system used for the transport and distribution of water.



LIMITES are the system of edges. They can be walls (as in the case of Britain and parts of Northern Europe), or ditches (as in the case of Germany). Limites may be intended as a fortification for the exclusion of barbarian invaders, although it is more common for edges to serve as regulators of trade, controlling the flow of goods entering, or leaving, the Empire. On the scale of the city, Roman walls also serve as containers, thereby establishing an interiorized urban condition.



VIAE form the network of stone-paved roads which connect all the cities of the Empire to one another. Viae are between 4-6m wide and allow for large-scale trading activity. Similarly, viae allow for the efficient (and regulated) flow of commercial products, slaves, animals, and mail.

TRADE/SERVICES

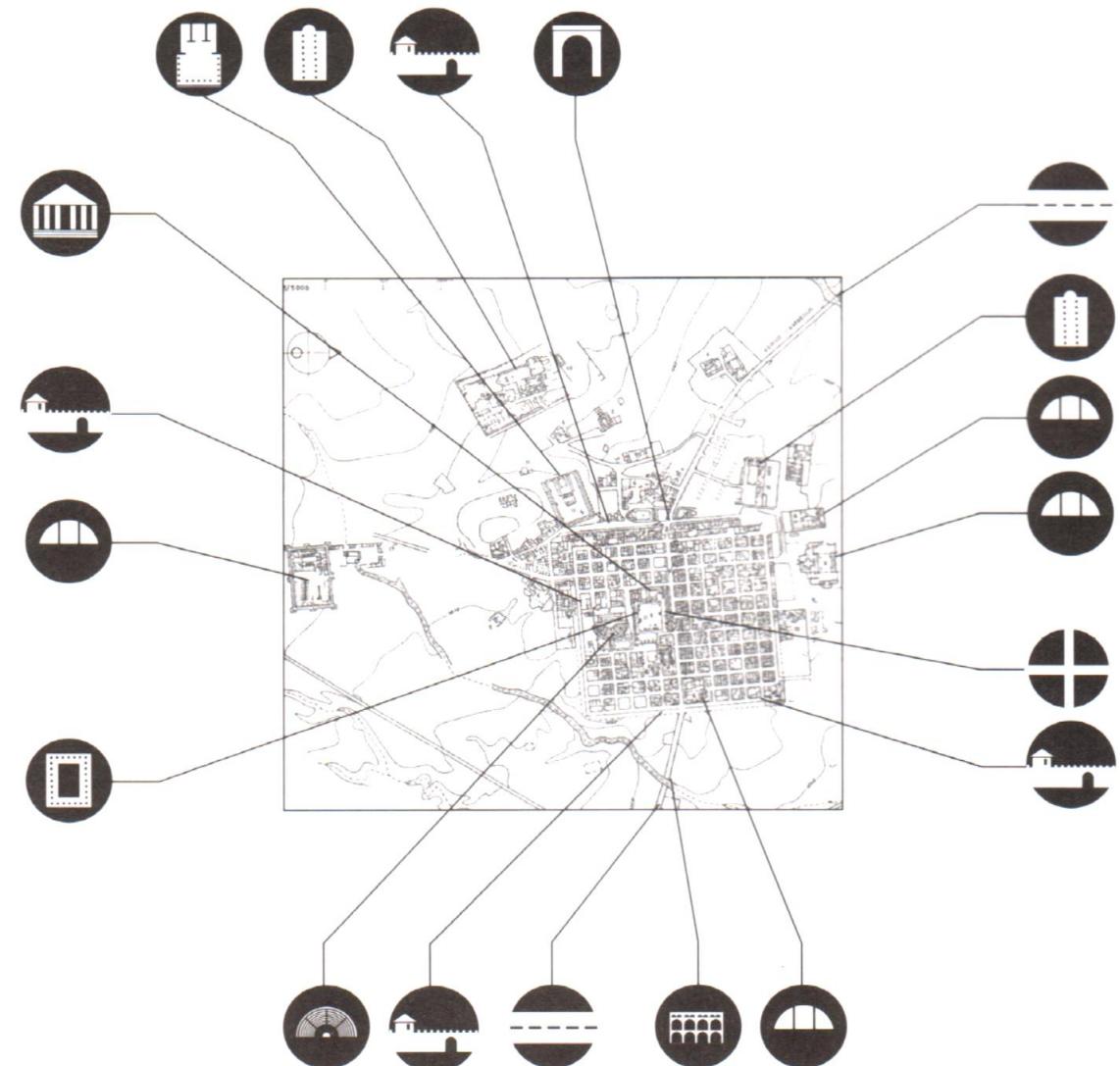
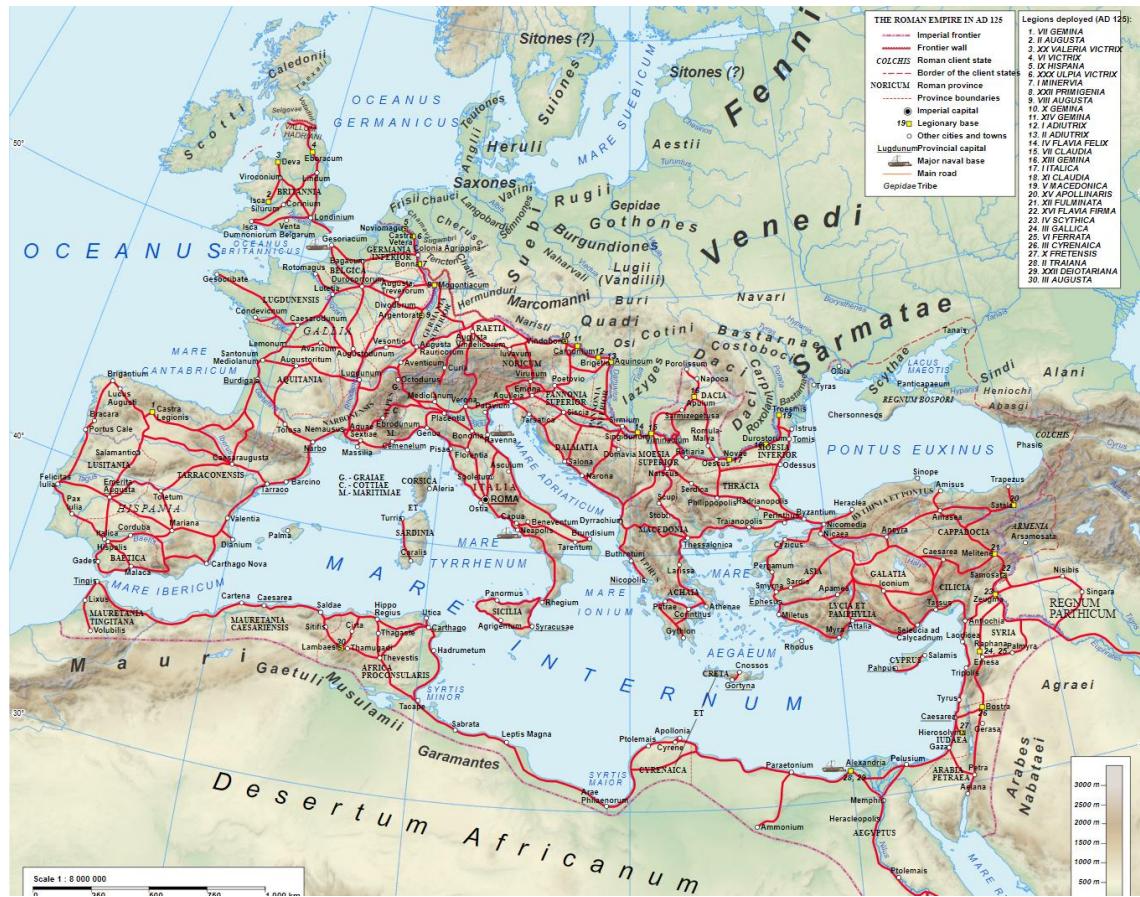


TRADE is a defining characteristic of the city. Commercial goods which might influence the development of the city include amphorae, animalia, argentus, aurum, marmor, materia, oliva oleum, piscis, garum, tricticum, and vinum.



Procesos para expandir un imperio

- Definir principios generales de operación
- Instalar el programa en una nueva ciudad
- Ejecutar el programa en la ciudad
- Reproducir las ciudades
- Interconectar las ciudades

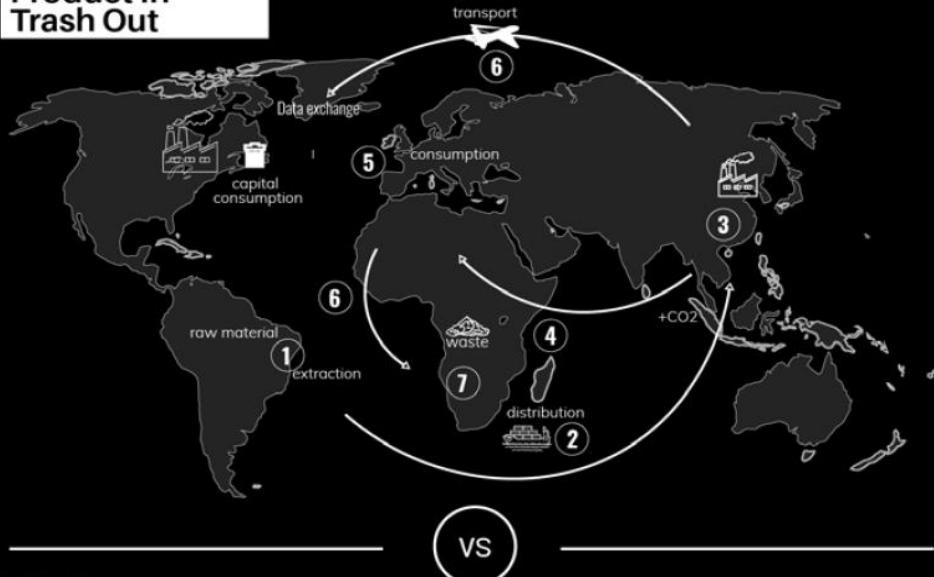


DESIGN REMIX SHAPE REPEAT

How distributed design is changing the way makers and designers approach collaboration, tools and the market.

BEFORE

Product In -
Trash Out



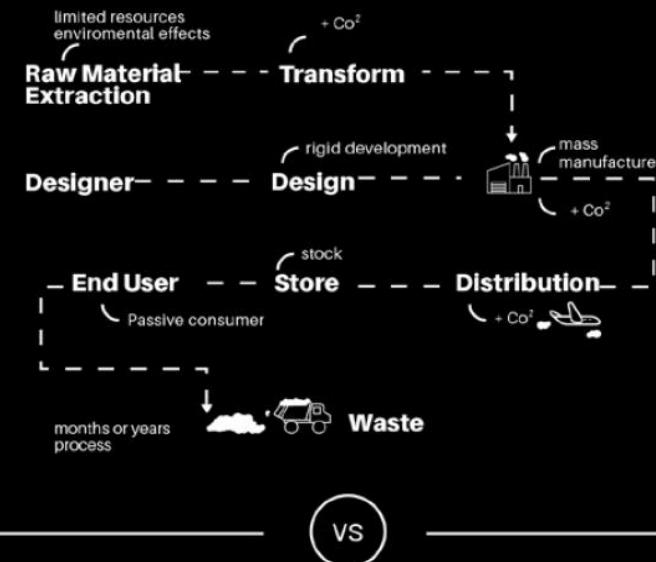
IDEAL

Data in -
Data Out

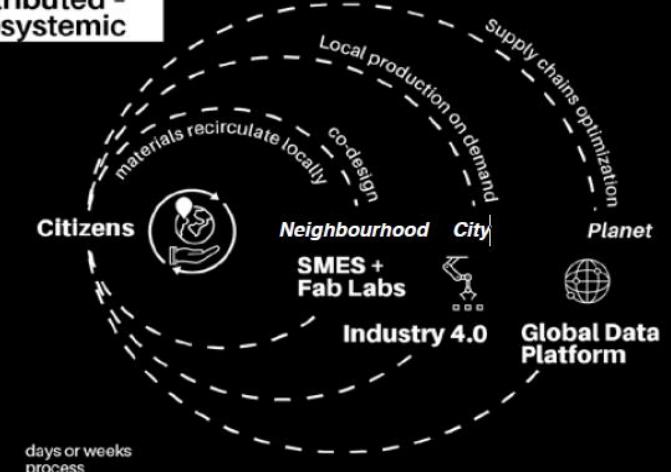


LINEAR

Centralised –
Siloed



Distributed -
Ecosystemic



Diseño Sistémico:

- Es un proceso creativo que involucra la producción de objetos que establecen relaciones económicas, ecológicas o culturales con un contexto determinado
- ¿Qué propongo diseñar? ¿Con qué o quiénes interactúa mi propuesta? ¿En qué espacio material o abstracto se desarrolla esta interacción?

Diseño Multidimensional:

- Es el diseño de interacciones a escala de objeto, comunidad, territorio, ecosistema, país y planeta.
- Es el diseño de una secuencia de actividades en el tiempo
- Es el diseño de sistemas de valor: económicos, culturales y/o ecosistémicos
- Genera sinergias y comportamientos emergentes que aportan más valor que la suma de sus partes



¿A? ↗ ¿Z?

Buena pregunta
Innovación en Contexto

Problema
Necesidad en el
territorio, referentes,
pregunta

Método
Estrategia analítica
mixta, diseño

Creación de Valor

Objetivo
Resultados,
proyecto,
conclusiones

Exceso



Carencia

Exceso



Carencia

Demandas

Desarrollo