

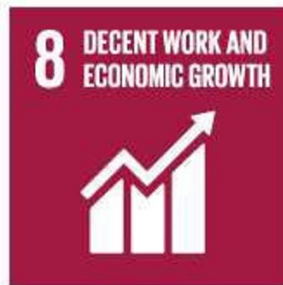
The Role of ICT Ecosystems in Achieving SDGs 11 & 12

William T Torres, PhD

Academician, NAST PHL

THE GLOBAL GOALS

For Sustainable Development



SDG 11. SUSTAINABLE CITIES & COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable.

By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

SDG 12. RESPONSIBLE CONSUMPTION & PRODUCTION

Ensure sustainable consumption and production patterns.

Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.

GOALS/TARGETS/INDICATORS

- GLOBAL

- Goals 17
- Targets 169 (10 for SDG 11 and 11 for SDG 12)
- Indicators 241

- PHILIPPINES

- Goals 17
- Targets ? (still to be determined)
- Indicators ? (100 SDGs indicators are suggested)

How do we (Filipinos) achieve the SDGs? (1)

- Set Targets (e.g., by each target year up to 2030)
 - Prioritize on the goals
 - Depends on national agenda
 - Depends on resources
- Monitor and measure progress in terms of the adopted indicators
 - Time frame (annually from 2016 to 2030)
 - National aggregation of data
 - Gathering of data at local levels
- **Who are doing (or will) do the above and how will all of these be done?**

How do we (Filipinos) achieve the SDGs? (2)

- What is our Action Agenda to 2030?
 - What are the development programs and projects?
 - What are the priorities?
 - What are the national/local action plans for these?
 - What are the deliverables?
 - What are the resources required?
- Who are doing the planning and monitoring/evaluation?
- Who are responsible for addressing the above questions?

My Recommendation:

Let's learn about and adopt new approaches/tools

- **Ecosystems Approach**
- **Business Ecosystems**
- **ICT Ecosystems**

An **ecosystem** is a community of living organisms in conjunction with the nonliving components of their environment (things like air, water and mineral soil), interacting as a system. These biotic and abiotic components are regarded as linked together through nutrient cycles and energy flows. As ecosystems are defined by the network of interactions among organisms, and between organisms and their environment, they can be of any size but usually encompass specific, limited spaces.

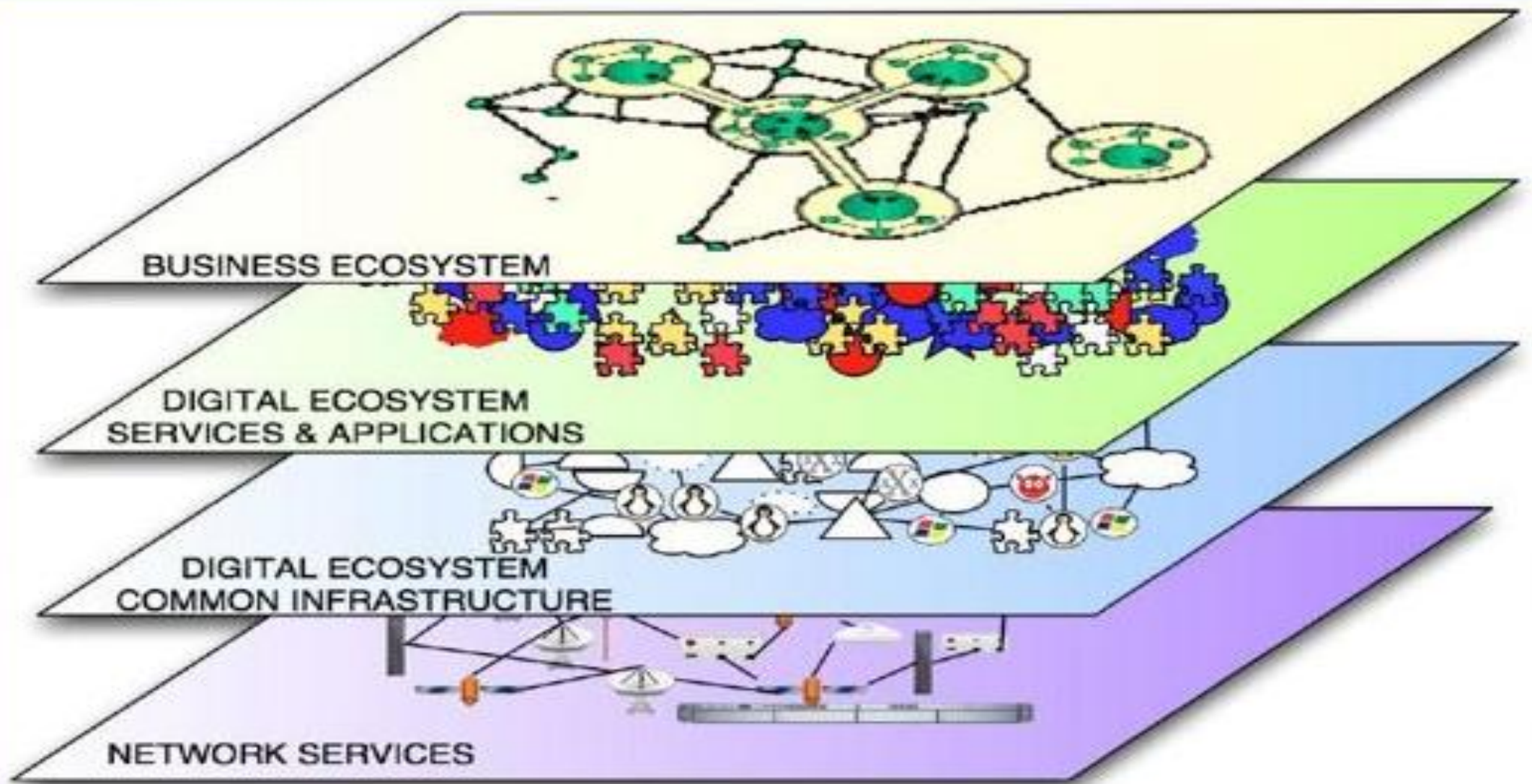
Energy, water, nitrogen and soil minerals are other essential abiotic components of an ecosystem. The energy that flows through ecosystems is obtained primarily from the sun. It generally enters the system through photosynthesis a process that also captures carbon dioxide from the atmosphere. By feeding on plants and on one another, animals play an important role in the movement of matter and energy through the system. They also influence the quantity of plant and microbial biomass present. By breaking down dead organic matter, decomposers release carbon back to the atmosphere and facilitate nutrient cycling by converting nutrients stored in dead biomass back to a form that can be readily used by plants and other microbes.^[7]

Business Ecosystem

James F. Moore (1993)

“An economic community supported by a foundation of interacting organizations and individuals—the organisms of the business world. The economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organisms also include suppliers, lead producers, competitors, and other stakeholders. Over time, they coevolve their capabilities and roles, and tend to align themselves with the directions set by one or more central companies. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments, and to find mutually

<https://cyber.harvard.edu/epolicy/roadmap.pdf>



Derivative work from Salzburg Technical University

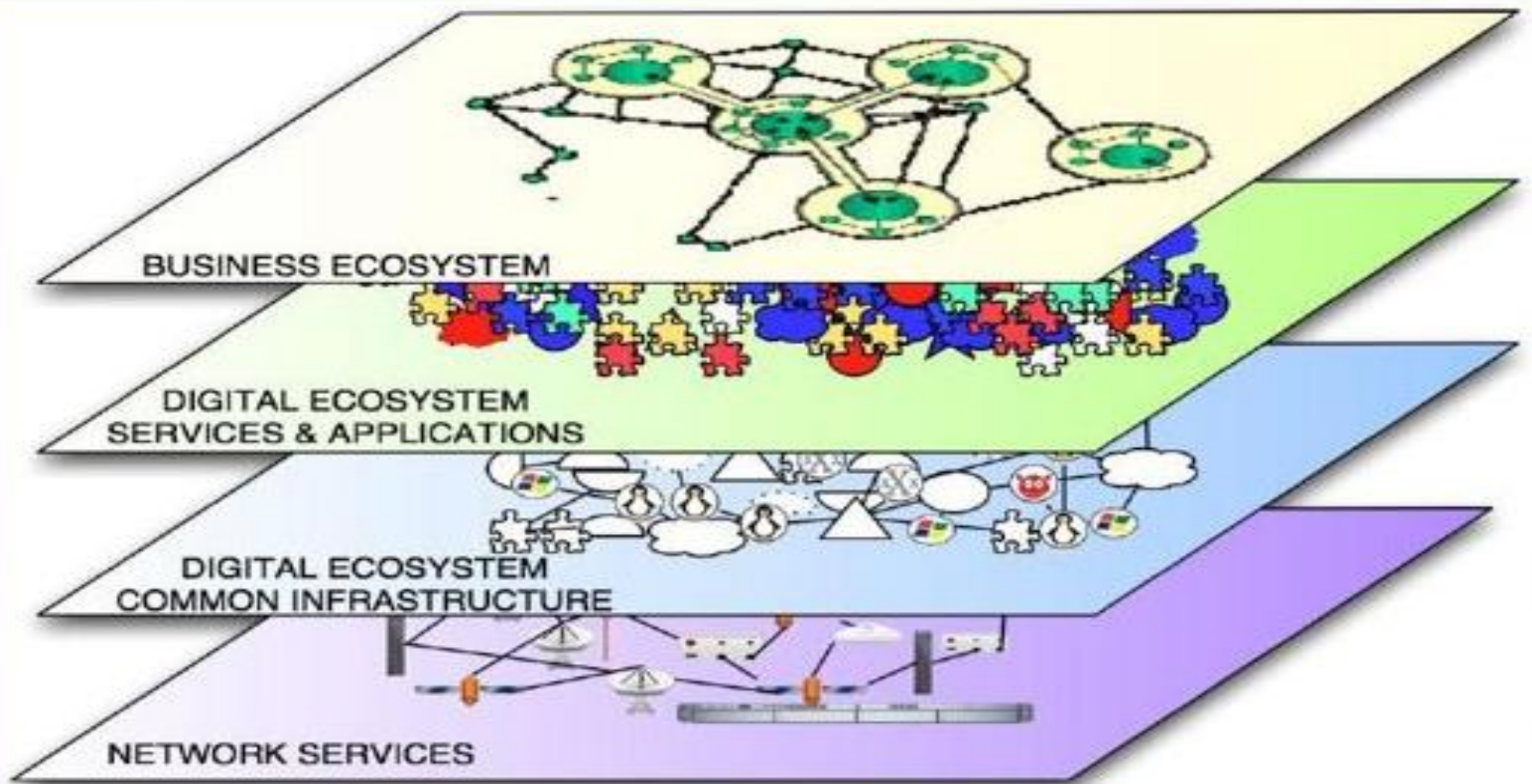
Ecosystems approach to our problem

1. **Develop/Evolve a business ecosystems for each SDG Target**

Note: There will be many such business ecosystems!

2. Develop/Evolve a shared and dedicated set of ICT Ecosystems for the entire Philippine national SDG programme

- *Important: These two shall be done symbiotically!*



Derivative work from Salzburg Technical University

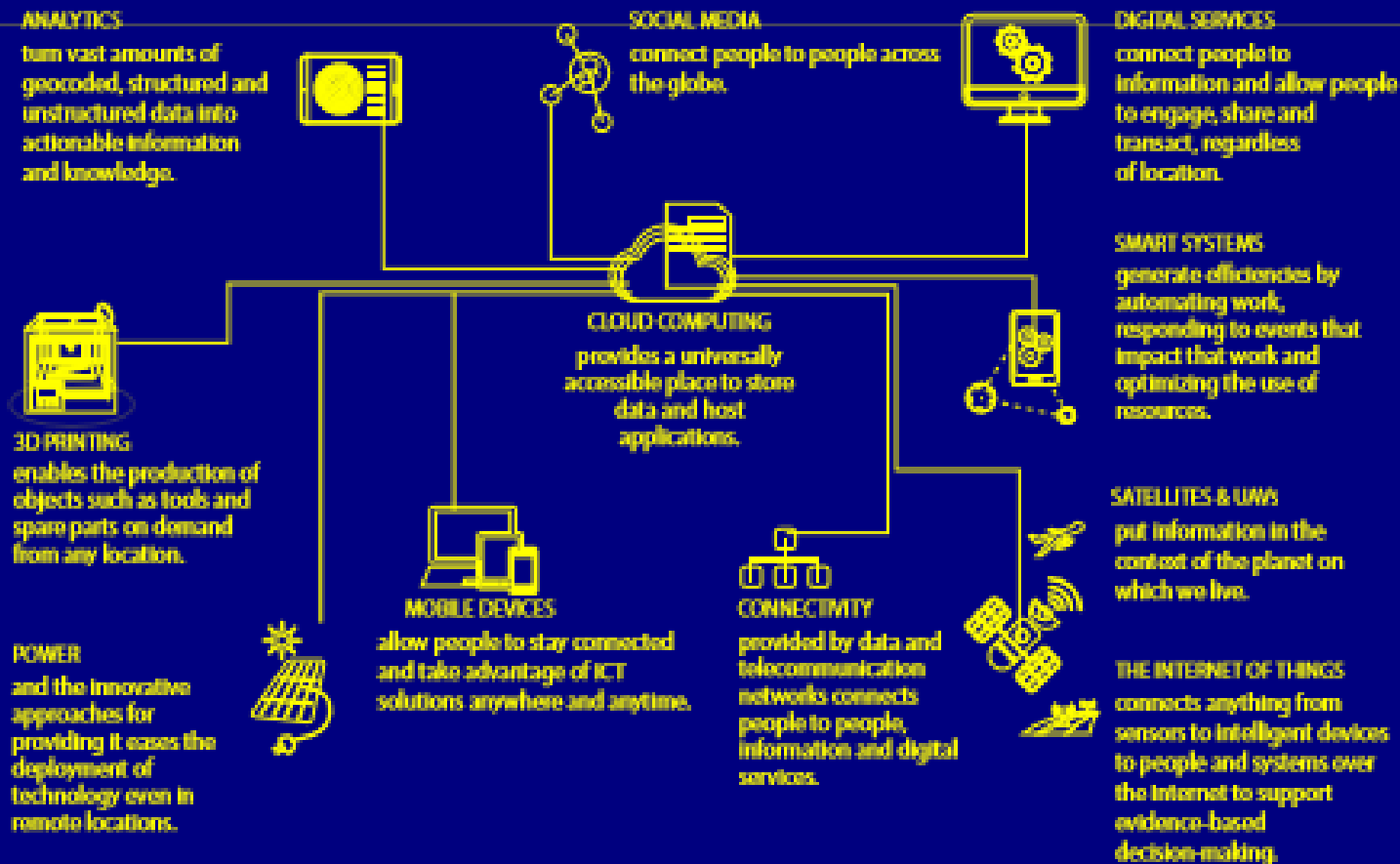
ECOSYSTEM ENABLERS LOOK OUTWARD ACROSS SIX KEY AREAS



Source: Kaleido Insights: Three Macrotrends Impacting the Journey to 2030

ICT Portfolio

A core set of technologies have emerged that have great potential to improve development program impacts and empower communities. These are the building blocks that comprise many impactful ICT solutions. Some are in use in developing countries today. Others will take time to make their way into global use, but are essential to addressing complex development problems in the face of scarce resources. While new technologies inevitably will emerge, these are a good starting point for aligning an organization's ICT investments with its strategic goals.



From:

SDG ICT PLAYBOOK