

Circular economy competences and learning innovations as a basis for building a sustainable future

Marleena Ahonen

Specialist, Circular economy
Finnish Innovation Fund Sitra

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@sitrafund      



A gift to Finland

The Finnish Parliament established Sitra as a gift celebrating the 50th anniversary of Finland's independence.

The public future-oriented organisation was given the mission to build the successful Finland of tomorrow.

The year was 1967.



Erkki Laitila, HS/Lehtikuva 1967

Pushing Finland to become a global forerunner in the circular economy

Sitra's work on the circular economy started in 2015. Since then, we have

- compiled the first national circular economy road map in the world
- built tools for businesses to move towards a circular economy
- created a global circular economy community around the World Circular Economy Forum.





BIODIVERSITY LOSS



CLIMATE CHANGE



**DEPLETION OF
NATURAL RESOURCES**

90%

OF BIODIVERSITY LOSS AND WATER STRESS ARE CAUSED BY RESOURCE EXTRACTION AND PROCESSING

IRP Global Resources Outlook 2019

OECD Global Material Resources Outlook to 2060

Ellen MacArthur Foundation, 2019

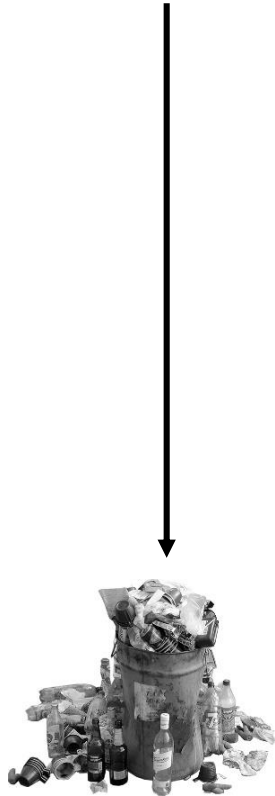
45%

45 PER CENT OF CLIMATE EMISSIONS ARE ASSOCIATED WITH MAKING PRODUCTS.

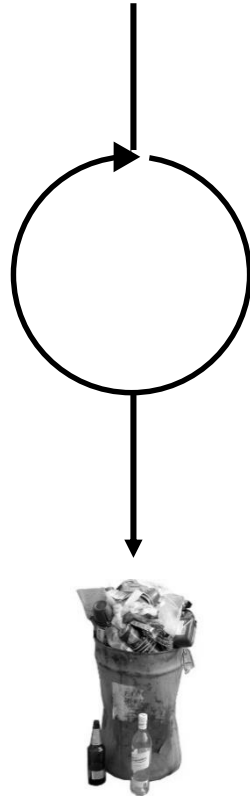
x2

GLOBAL MATERIAL USE IS PROJECTED TO MORE THAN DOUBLE FROM 79 GT IN 2011 TO 167 GT IN 2060.

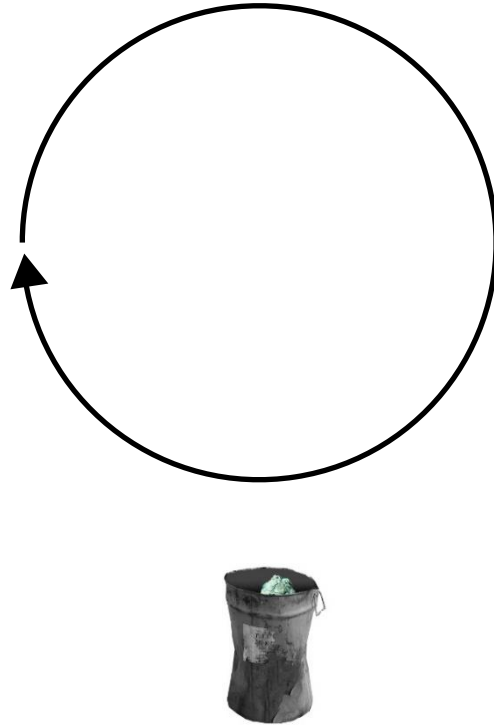
THE LINEAR ECONOMY



THE RECYCLING ECONOMY

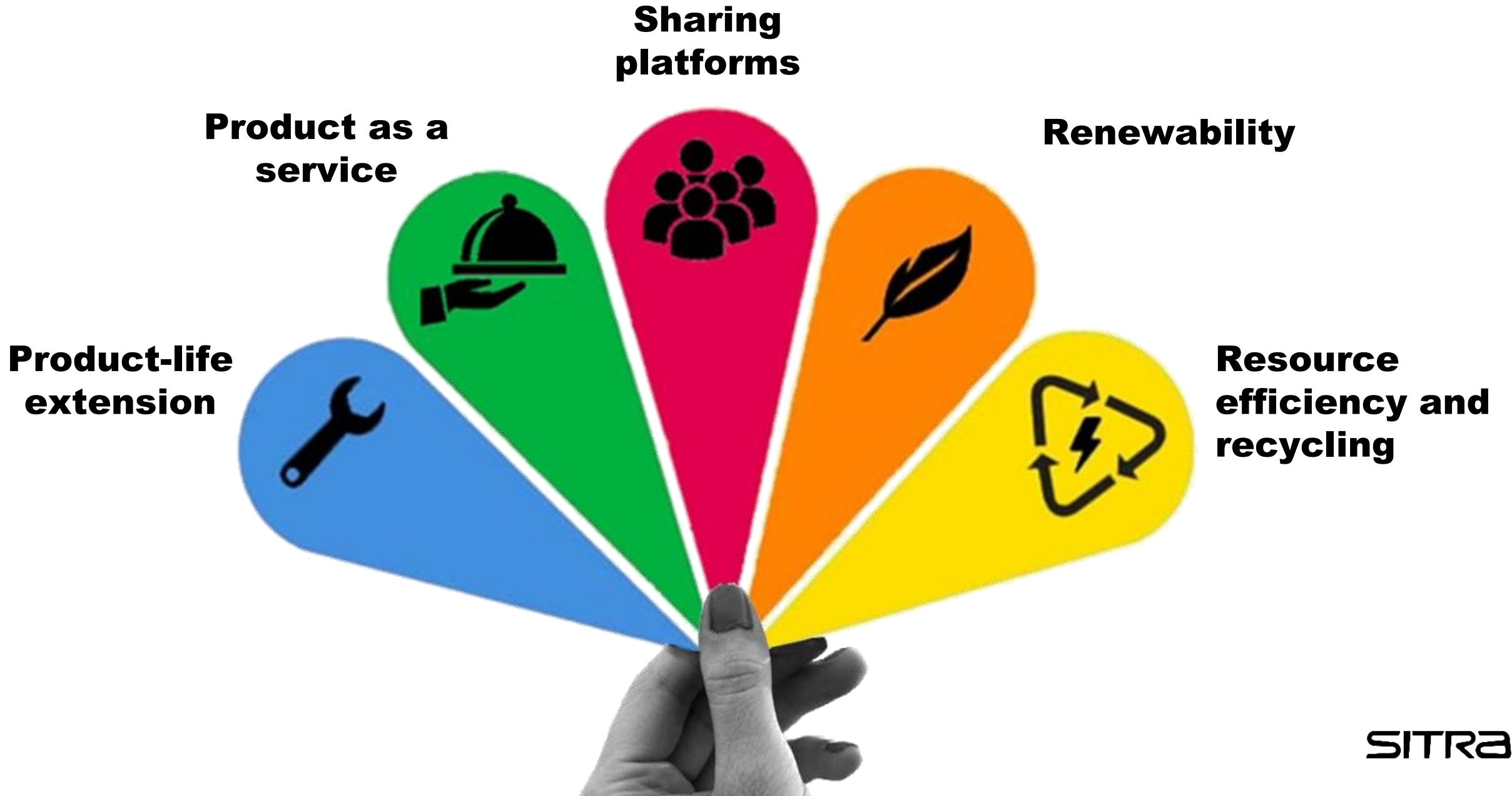


THE CIRCULAR ECONOMY



Shifting to a circular economy calls for a **fundamental change in the way we produce and use materials and goods.**

This brings about a need of **new competence and skillset.**



We don't need numerous
general circular economy
experts.

What we need is
thinkers and doers
who understand how circular
economy principles can be
applied in their jobs as
engineers, teachers, assembly
line workers or fashion
designers.



Engineering

Transportation and logistics

Forest Industry



Processing Industry

Construction Industry

Mining Industry

Marketing

Electronics Industry

Circular Economy Specialist

Business

Chemistry

Environmental legislation

Chemical expert



Hybrid and composite material specialist

Forestry

Communications

Environmental Policy

Hybrid and composite material specialist

Food Industry

Agriculture



Procurement



Contract Law

Education



SITRA

What skills are needed?

- Skills related to the circularity of materials, from product design to recycling and reuse
- Skills that support the circularity infrastructure, e.g. reverse logistics and material infrastructure management
- Skills on repairing and maintaining goods
- Service skills, e.g. knowledge on digital platforms in sharing economy or second-hand markets
- Creative skills, e.g. design and marketing of circular products and services



**CARBON NEUTRAL
CIRCULAR ECONOMY
PROFESSIONAL**

Vocational school

Upper secondary school

How to make the circular economy part of the national education system – Tips from Finland

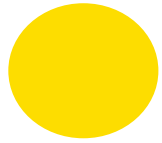
Lifelong learning

Primary school

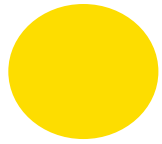
Universities of Applied Science

Universities

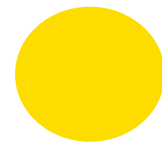




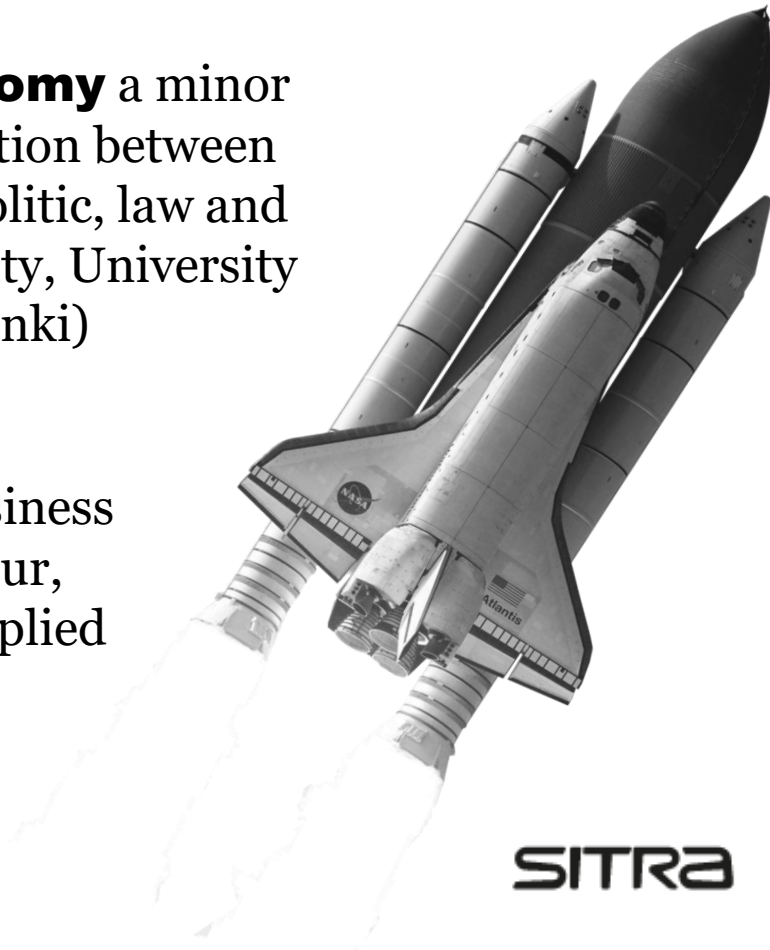
Leadership for Sustainable change how to lead change in complex systems by utilising circular economy, needed skills, knowledge and attitudes, how to make and collaborate on a concrete sustainability project plan (University of Helsinki, Tampere University, University of Jyväskylä)



Multidisciplinary study module on the circular economy a minor subject study module on the circular economy through co-operation between the five universities. F.e. CE Design Forum, Circular economy politic, law and societies, Environmental Chemistry and Ecology (Aalto University, University of Oulu, University of Eastern Finland, LUT, University of Helsinki)



Circular economy in food chains f.e. Nutrient cycles, Business opportunities, Product development, Modern consumer behaviour, digitalization. (Seinäjoki, Savonia and Karelia Universities of Applied Sciences and Universities of Vaasa and Jyväskylä)



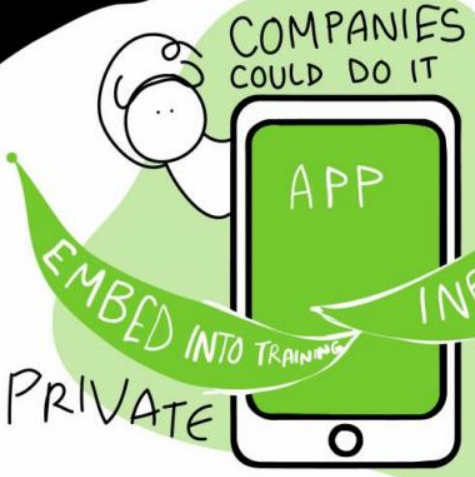
FEAR...

Legislation



ORGANISATION
OBLIGATION
COMPULSARY!
RIGHTS?

INSTITUTIONAL LEARNING



COMPANIES COULD DO IT
EMBED INTO TRAINING
PRIVATE

INCENTIVES

EARLY ON
CREATIVITY
IN
LEARNING

share as equals



APPROACH TO TEACHING & LEARNING



OUR HOUSE
ECONOMY
MANAGE

RULES OF SOCIETY

INFORMATION

UNDERSTAND



FUNDS
PUBLIC



INTERNAL PROCESS

OPPORTUNITIES
IMPACT
IMMEDIATE
LOCAL
GLOBAL

What is in it for me?

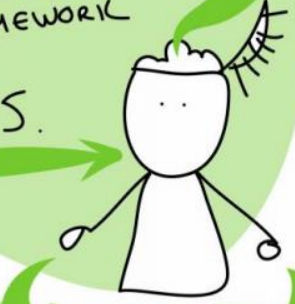
WORK?

PRIORITY?

BUSINESS & DESIGN

DIFFERENT FRAMEWORK

V.S.



ENGAGE EXPERIENCES

NOT A THING!

CHANGE IN THINKING

W The
C WORLD CIRCULAR ECONOMY FORUM 2015
E circular economy
F in lifelong learning



RAQUEL BENMERGUI

WE WANT BETTER BUT WE DON'T KNOW WHAT THAT IS...



ACTIVATE

LEARN Need

CULTURE

MEDIA

RELIGION

Psst.

CE for vocational schools
and life-long learning
piloting funding open until
30.3. in Sitra.fi Check it out!



**RISE TO
SHINE!**

