

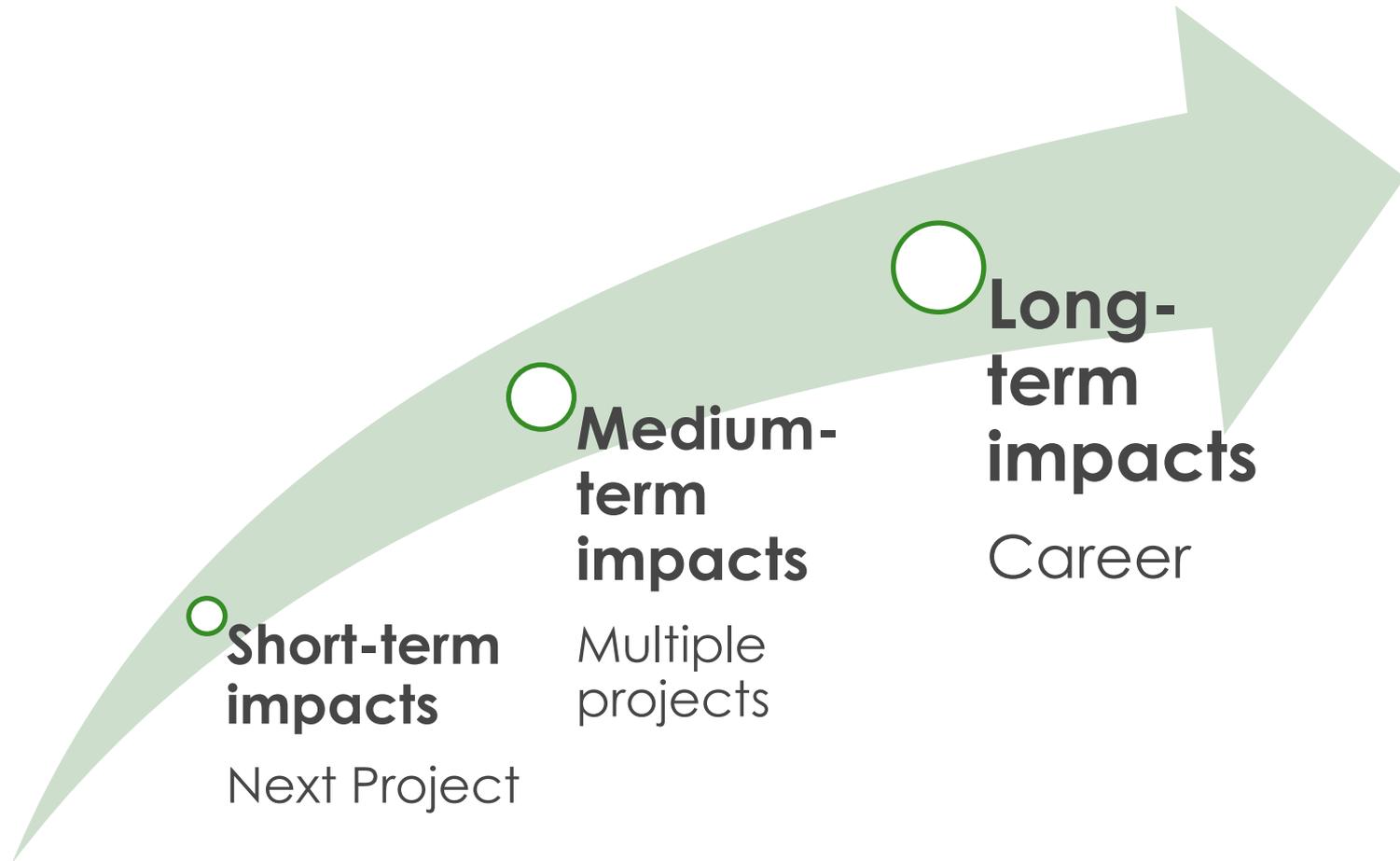


# Building Your Research Impact Identity and Vision

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# Impacts Throughout Your Career





# Workshop: Learning Objectives

You will be able to:

- Describe the key elements of your **impact identity**
- Explain how those elements are **assets** for achieving **societal impacts**
- Identify the impacts you hope to achieve **throughout your career**
- Outline a **plan** for achieving your research impacts
- Identify key **BI resources**
- Improve the quality of your research impact plans for your next **grant proposal**

# NSF Proposal Review Criteria



**Intellectual Merit:** Advance knowledge and understanding within its own field or across different fields



**Broader Impacts:** Benefit society or advance desired societal outcomes

***Research Impacts: Not just for NSF!***

# Broader Impacts Goal Areas



**Full Participation**



**Partnerships between  
Academia, Industry, etc.**



**Improved STEM Education**



**Improved National Security**



**Scientific Literacy and Public  
Engagement with Science**



**Increased Economic  
Competitiveness**



**Improved Well-being**



**Enhanced Research  
Infrastructure**



**Development of  
STEM Workforce**



**Use of Science to Inform  
Policy**



# Three Ways to Achieve Broader Impacts

1. Through the research itself
2. Through activities directly related to specific research projects
  - Recruit underrepresented students to work on the project
3. Through activities supported by, but complementary to the project
  - Public outreach activities



# How to Maximize Your Broader Impacts

Impact Identity

Impact Goals

Long-Term Plan

Supports and Resources

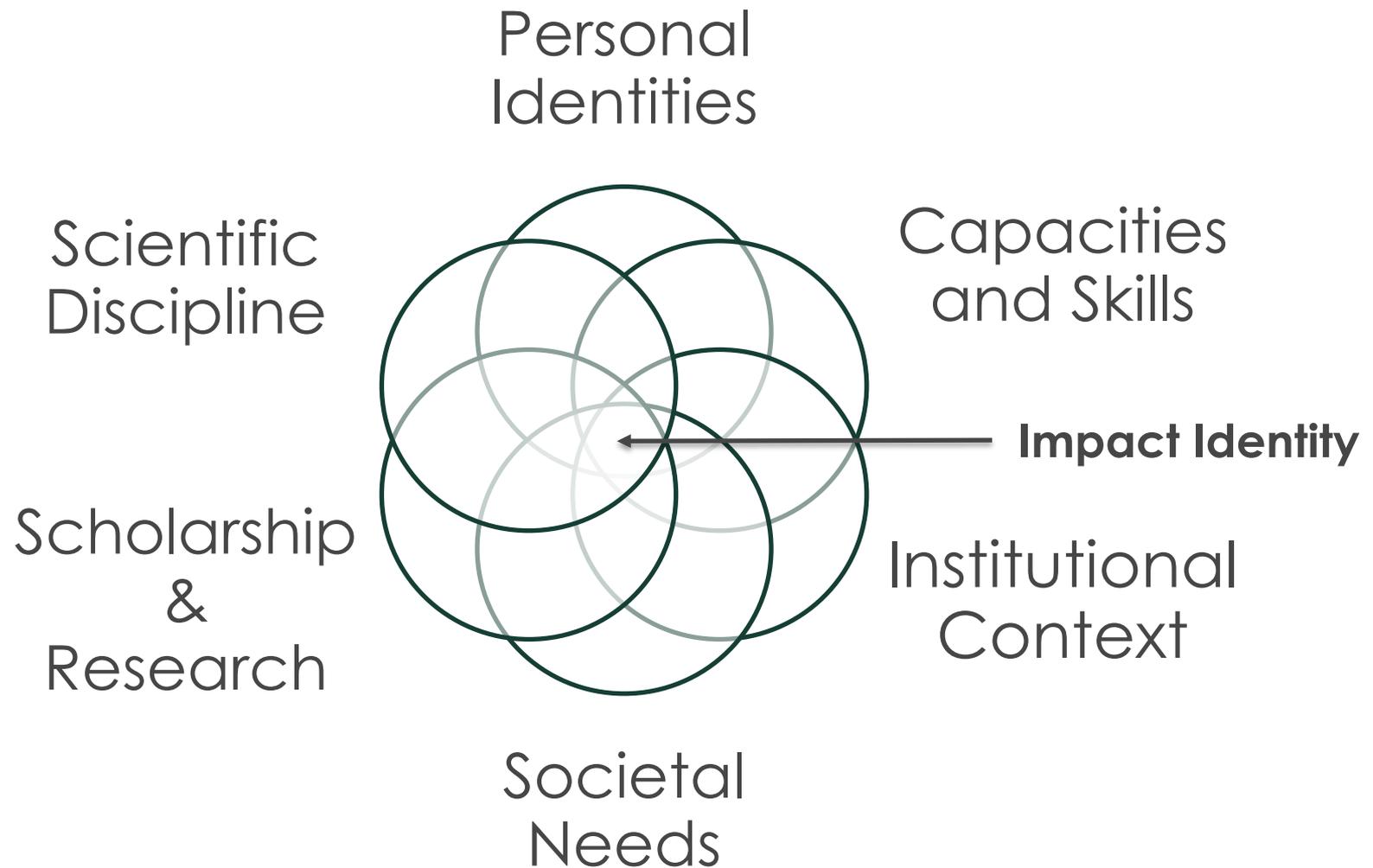


# Impact Identity

*“Impact identity results from a thoughtful and intentional integration of a scientist’s **multidimensional self-concept**. It blends the **researcher**, someone who aims at contributing knowledge within a scientific discipline, with the **engaged scholar**, or someone who ensures results of this research benefit society”*

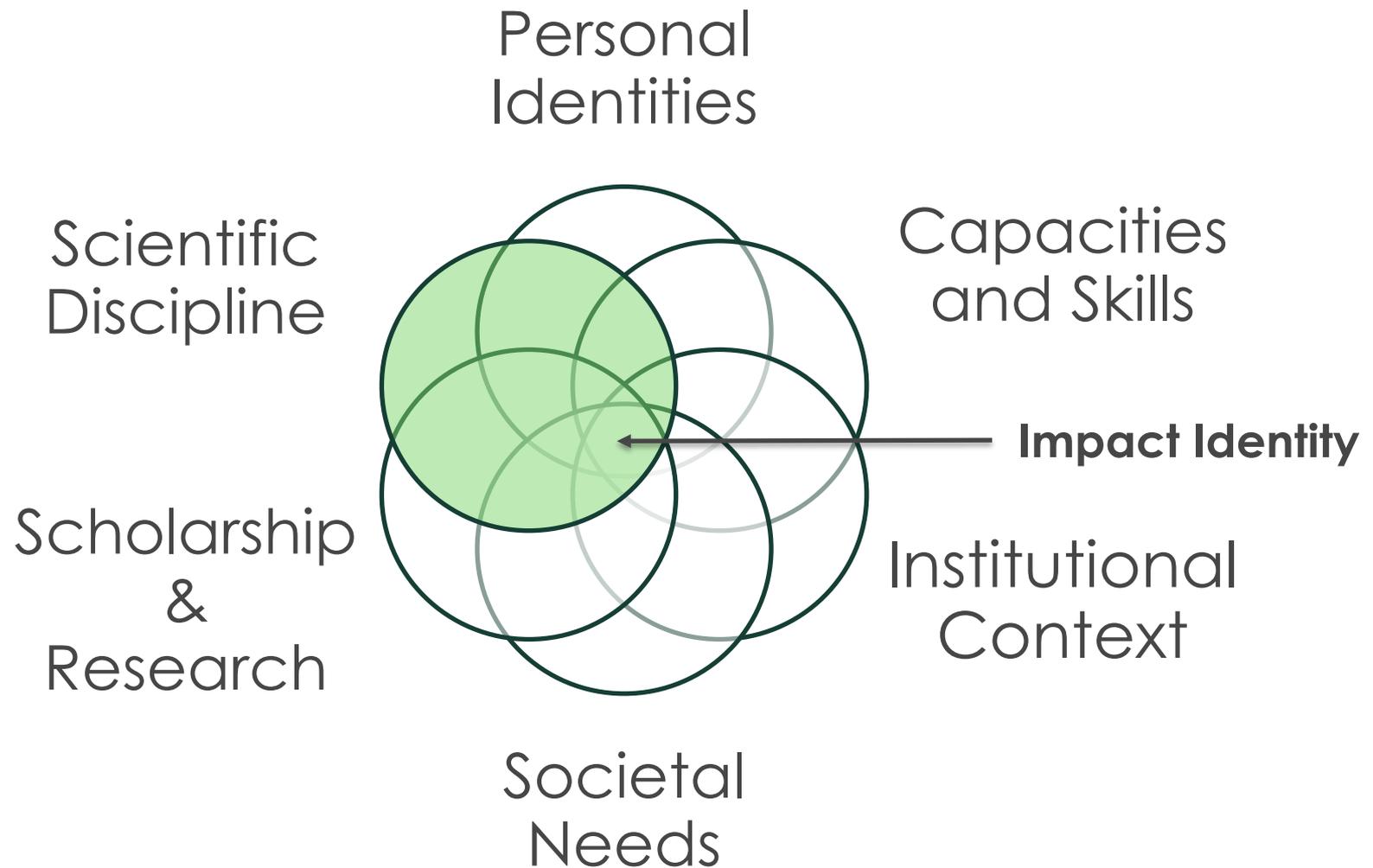
(Risien & Storksdieck, 2018).

# Elements of Your Impact Identity



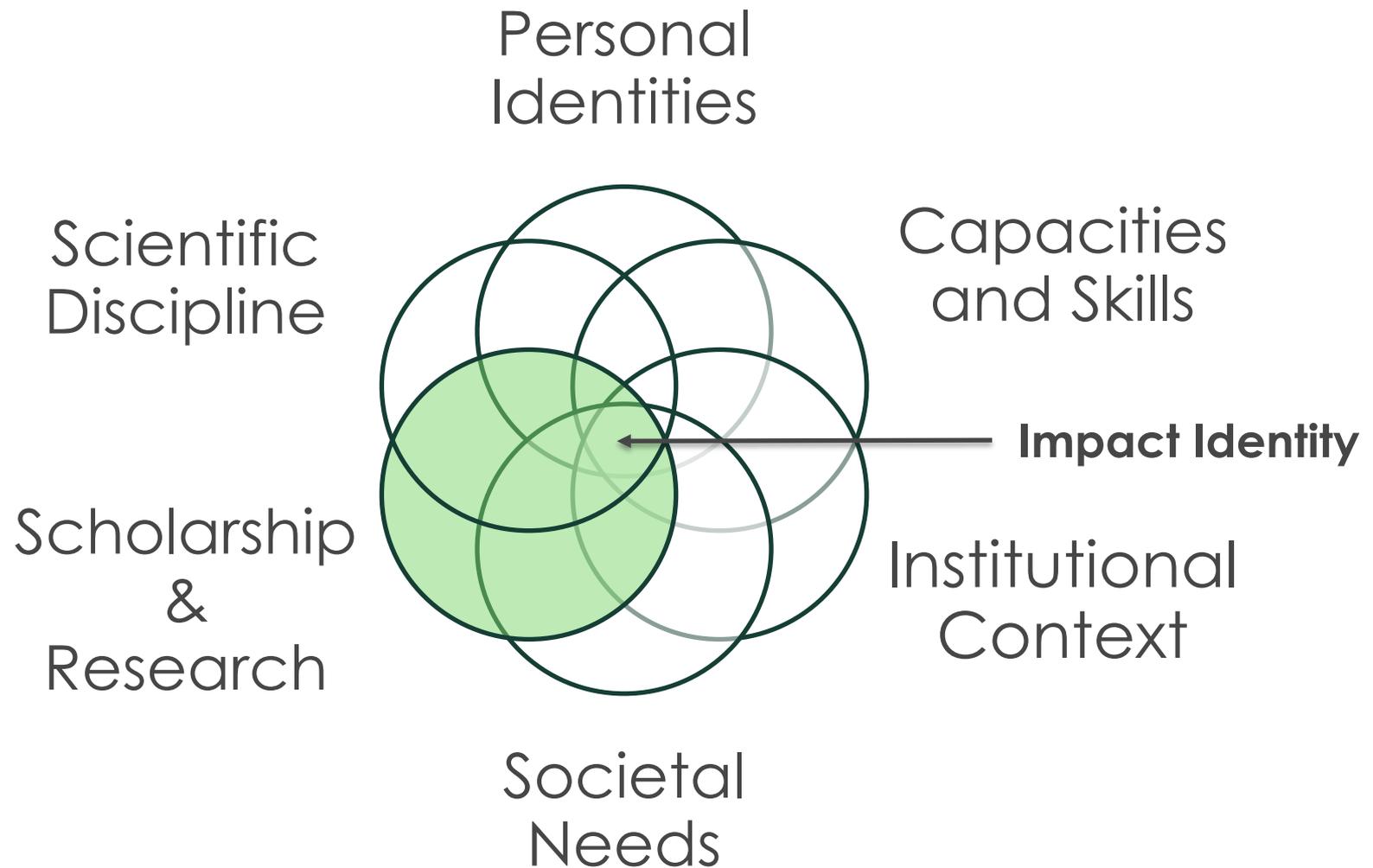
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



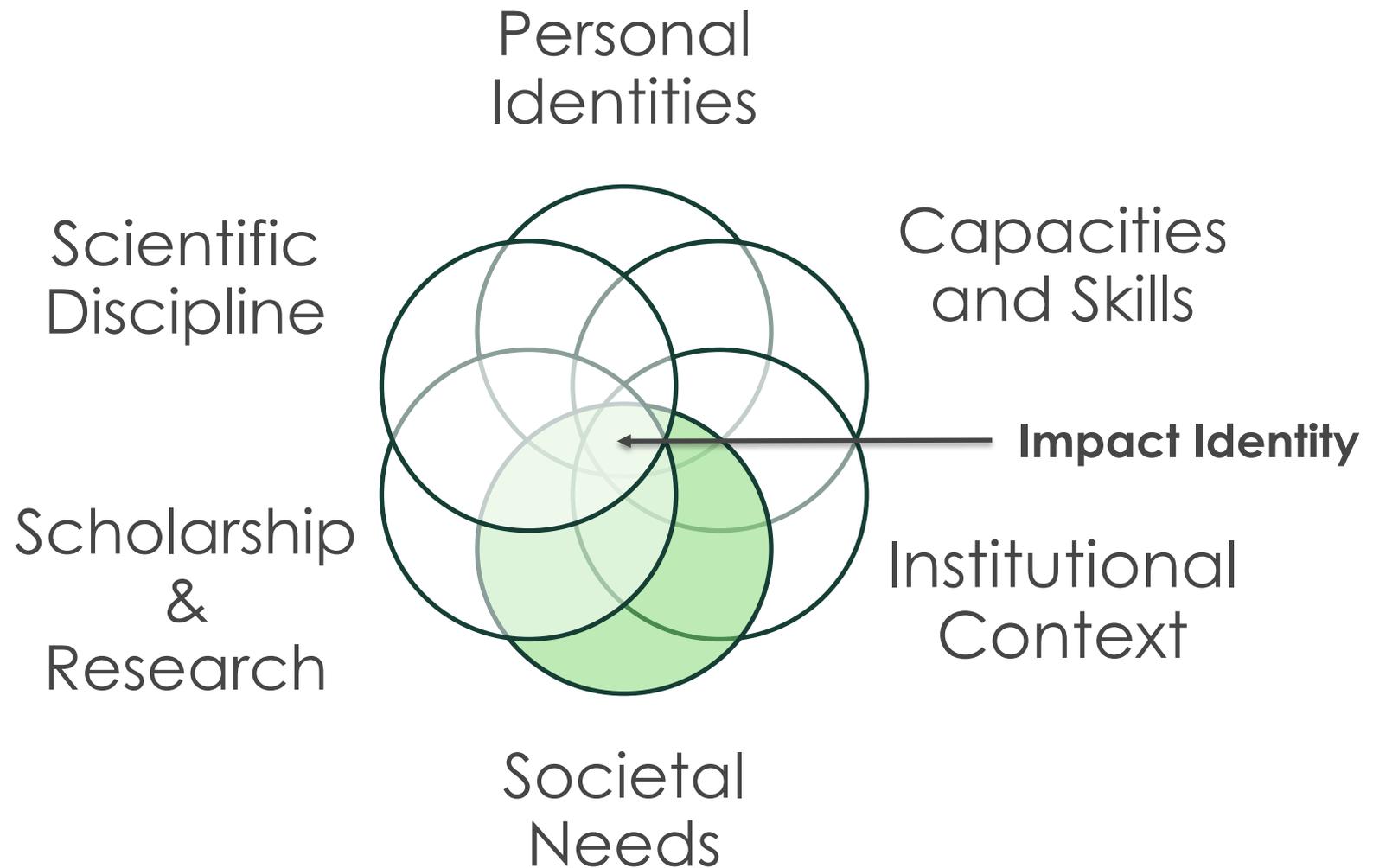
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



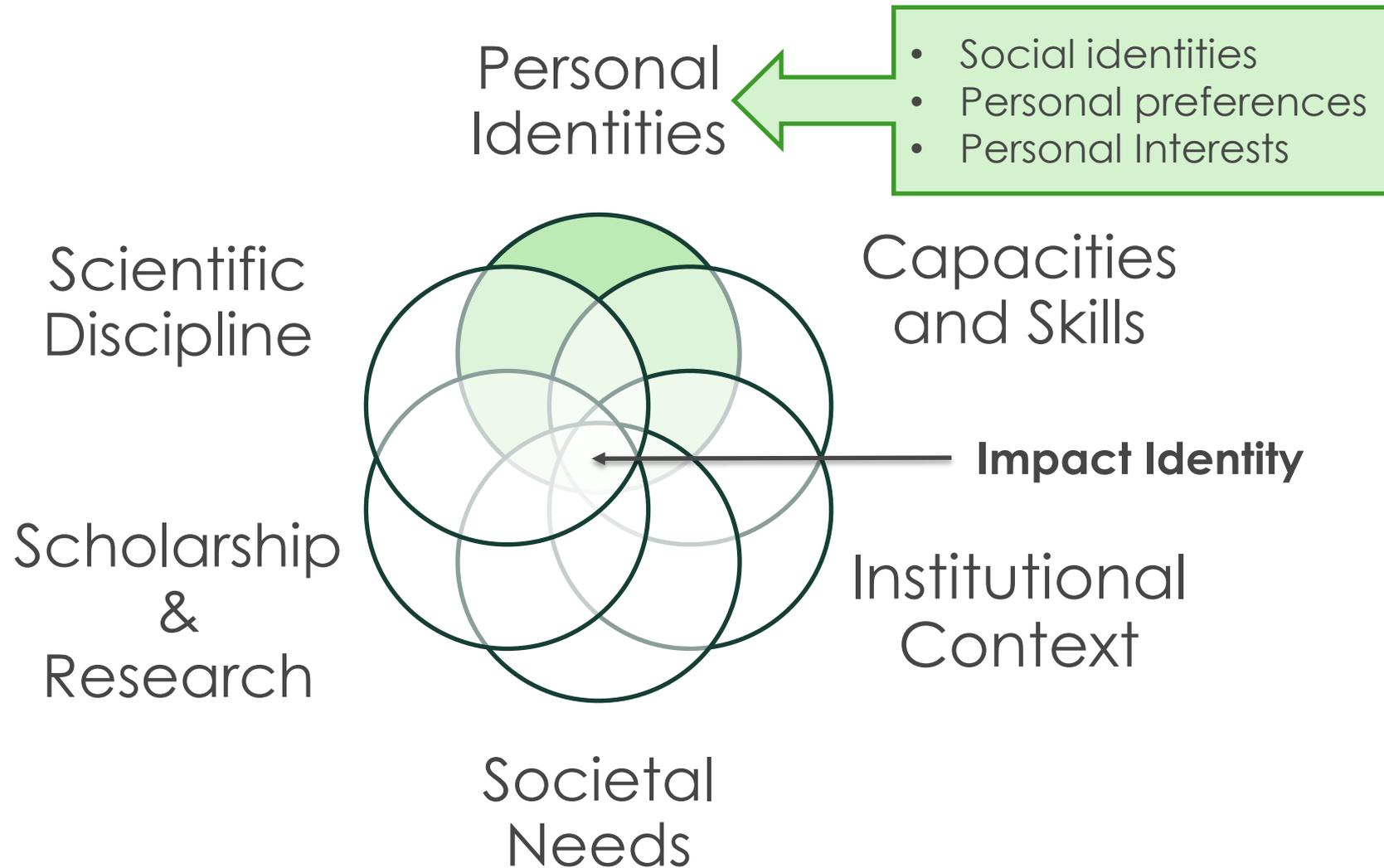
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



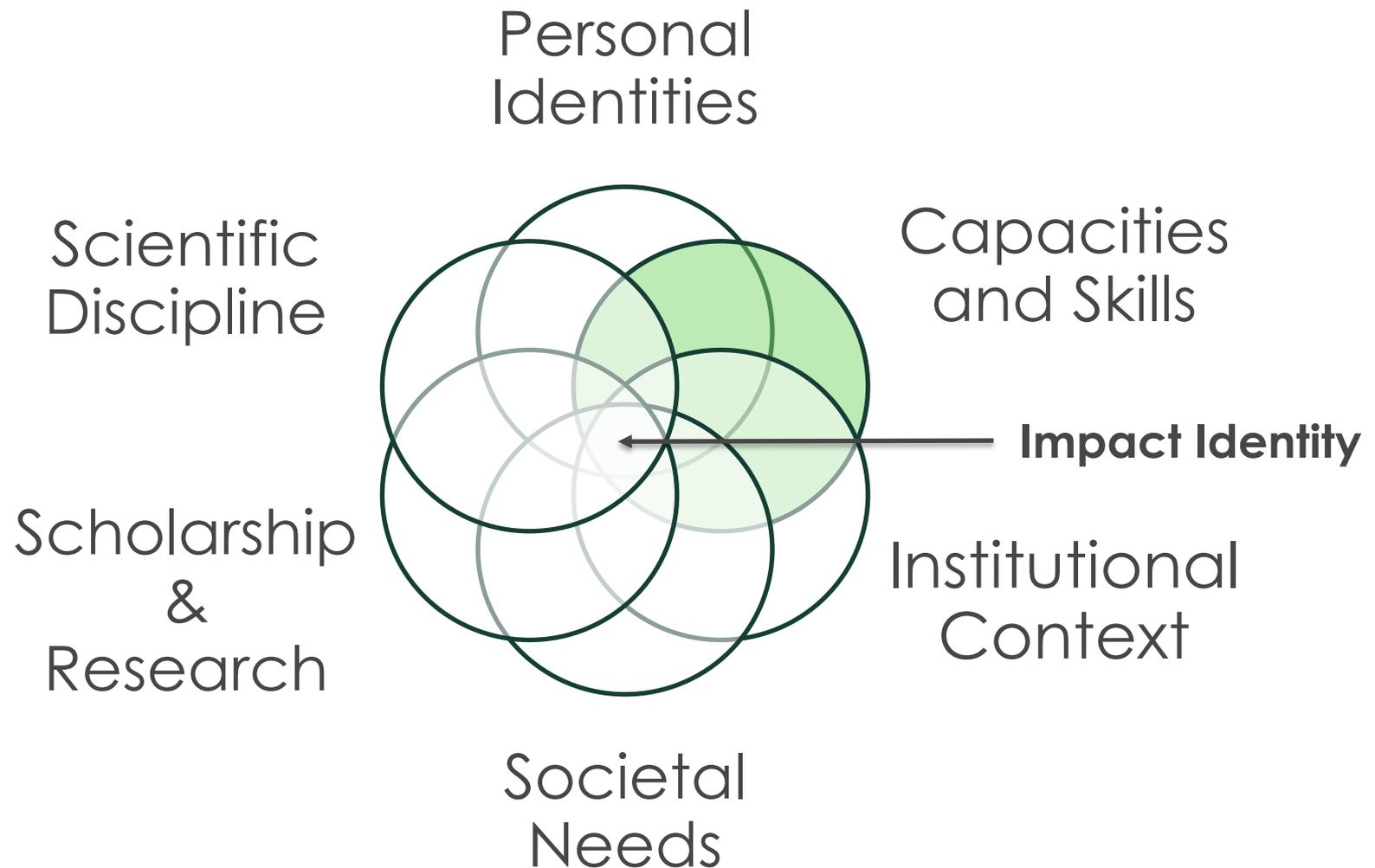
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



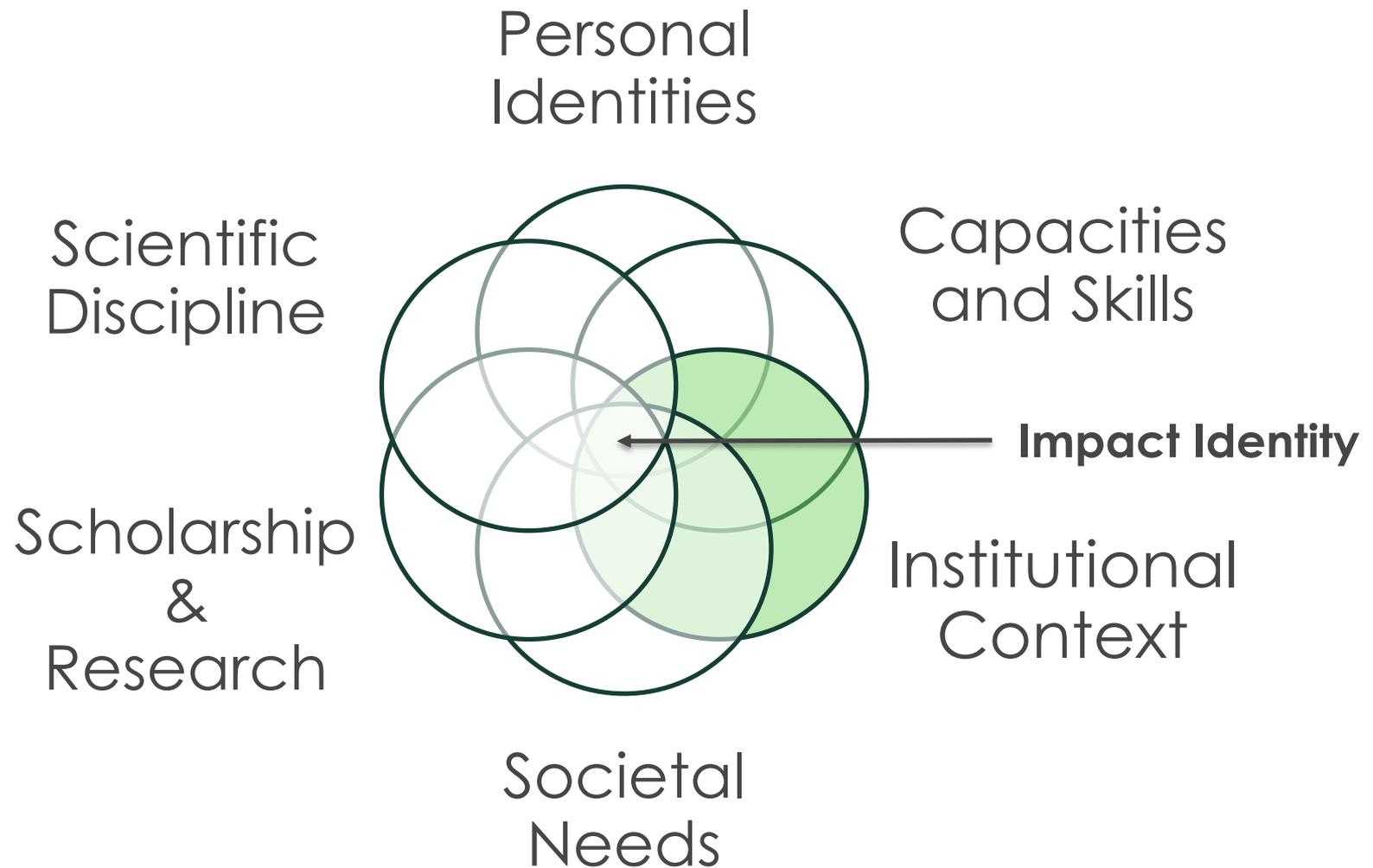
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



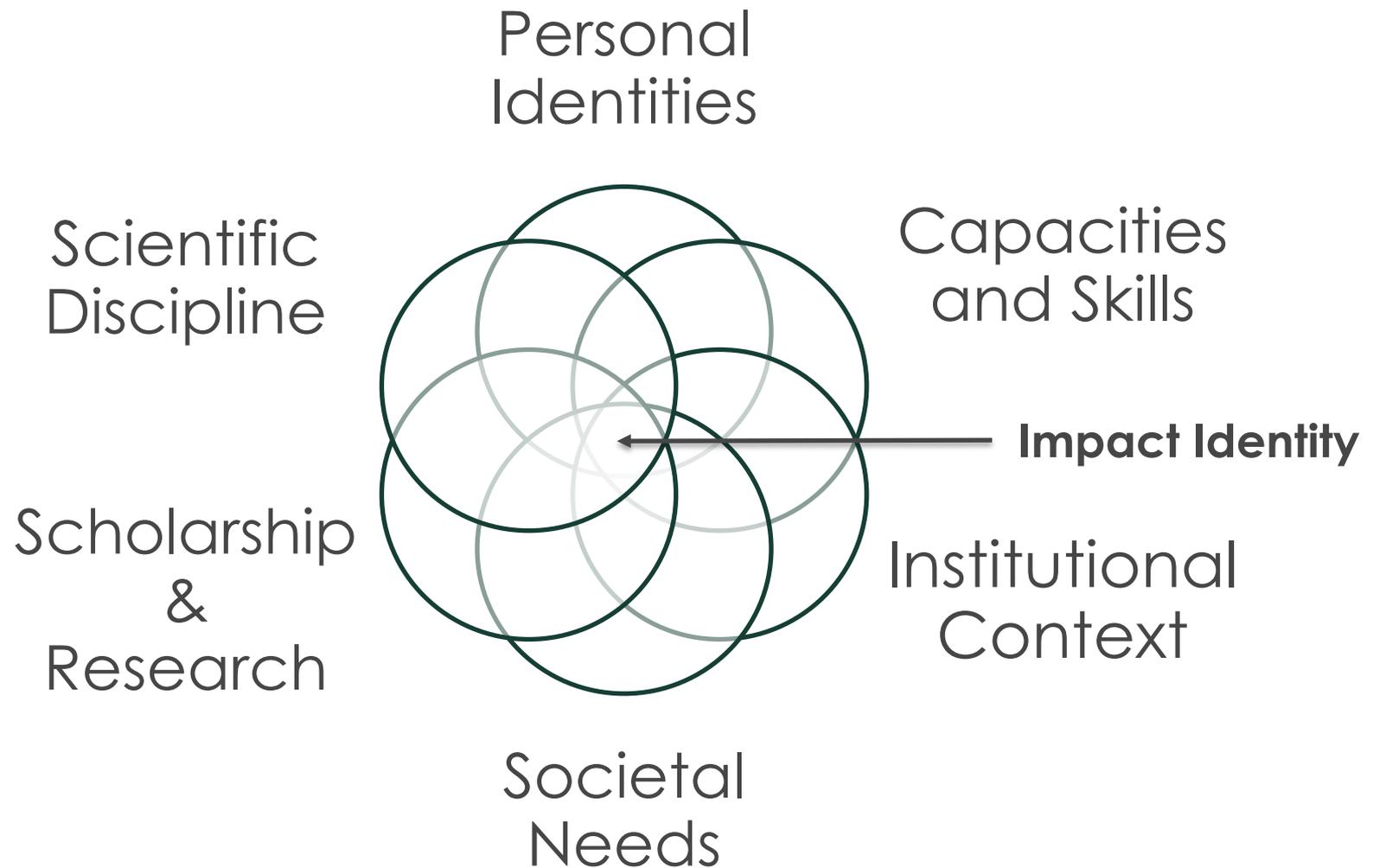
Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



Adapted from Risien & Storksdiel, 2018

# Elements of Your Impact Identity



Adapted from Risien & Storksdiel, 2018

# Impact Identity and Assets

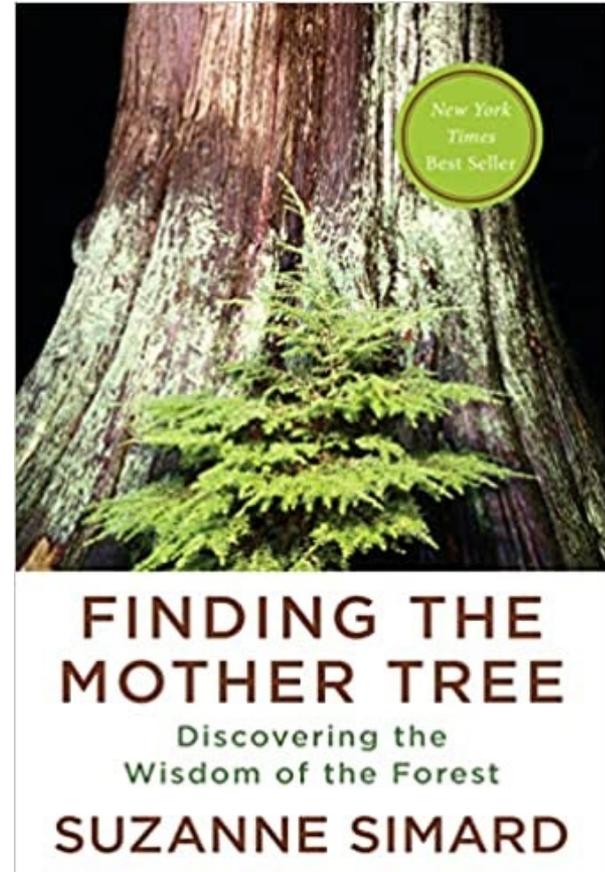
The elements of your impact identity are **assets** that contribute to your unique ability to achieve societal impacts through your research



# Impact Identity Example



Dr. Suzanne Simard  
Professor of Forest Ecology  
University of British Columbia





# Impact Identity



# Discipline, Scholarship & Societal Needs

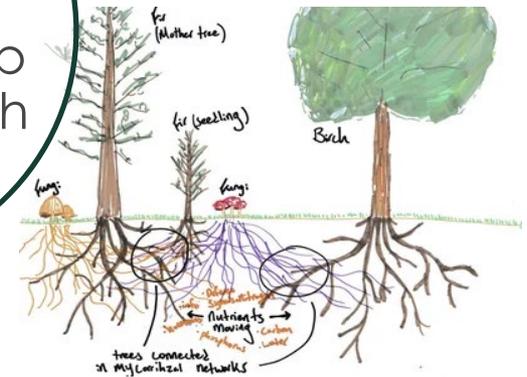


Forestry

# Discipline, Scholarship & Societal Needs



Forestry



Resource exchange through mycorrhizal networks

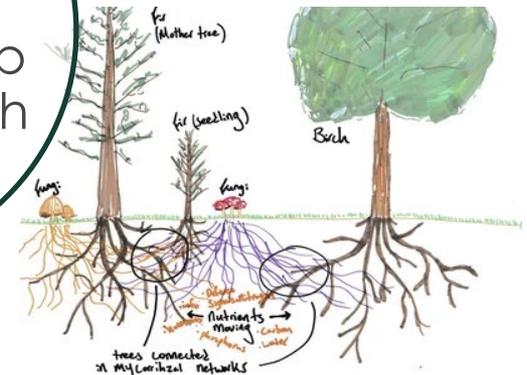
# Discipline, Scholarship & Societal Needs



- Forest resilience to climate
- Carbon sequestration
- Habitat preservation



Forestry



Resource exchange through mycorrhizal networks

# Discipline, Scholarship & Societal Needs

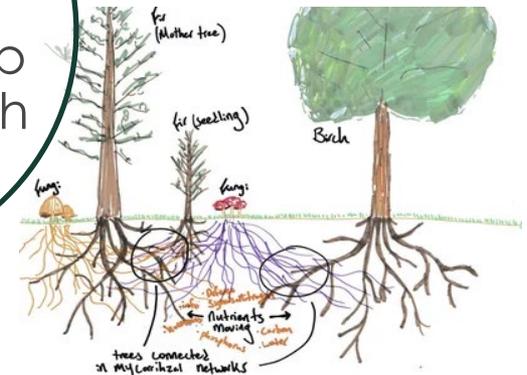
Impact  
Identity



- Forest resilience to climate
- Carbon sequestration
- Habitat preservation



Forestry



Information exchange through mycorrhizal networks

# Research Identity



- Your unique contribution to your field
- It shapes:
  - the collaborations you seek
  - the grants you target
  - the journals you try to publish in
- It evolves over time
- It contributes to your research legacy and impacts



# Research Impact Statement

- What questions drive my research?
- What societal needs does my research address?
- What societal impacts do I hope to achieve?



# Example Research Impact Statement

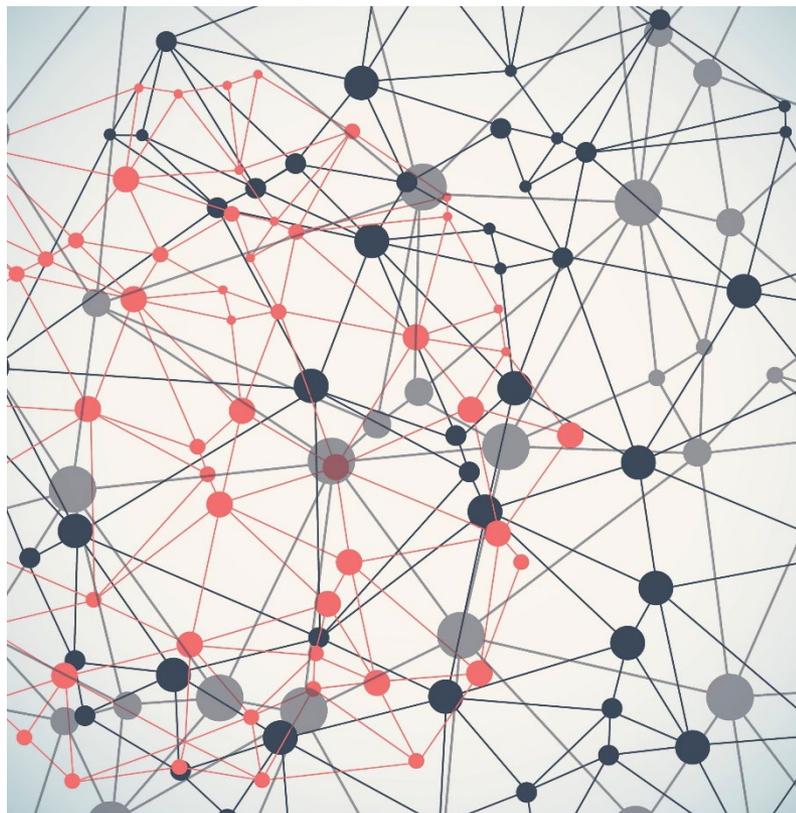
- I am a forest ecologist who studies the exchange of resources between trees through mycorrhizal networks.
- My research addresses a critical need to understand how these exchange networks contribute to the resilience of boreal forests to climate change.
- The intended impacts of my research are to transform our understanding of how forests operate, resulting in a shift in forestry practices away from clear-cutting to the cultivation of forests with a diverse mix of species that are more resilient to climate stress, increase carbon sequestration, and preserve wild habitats.



# Activity 1: My Research Identity (30 mins)

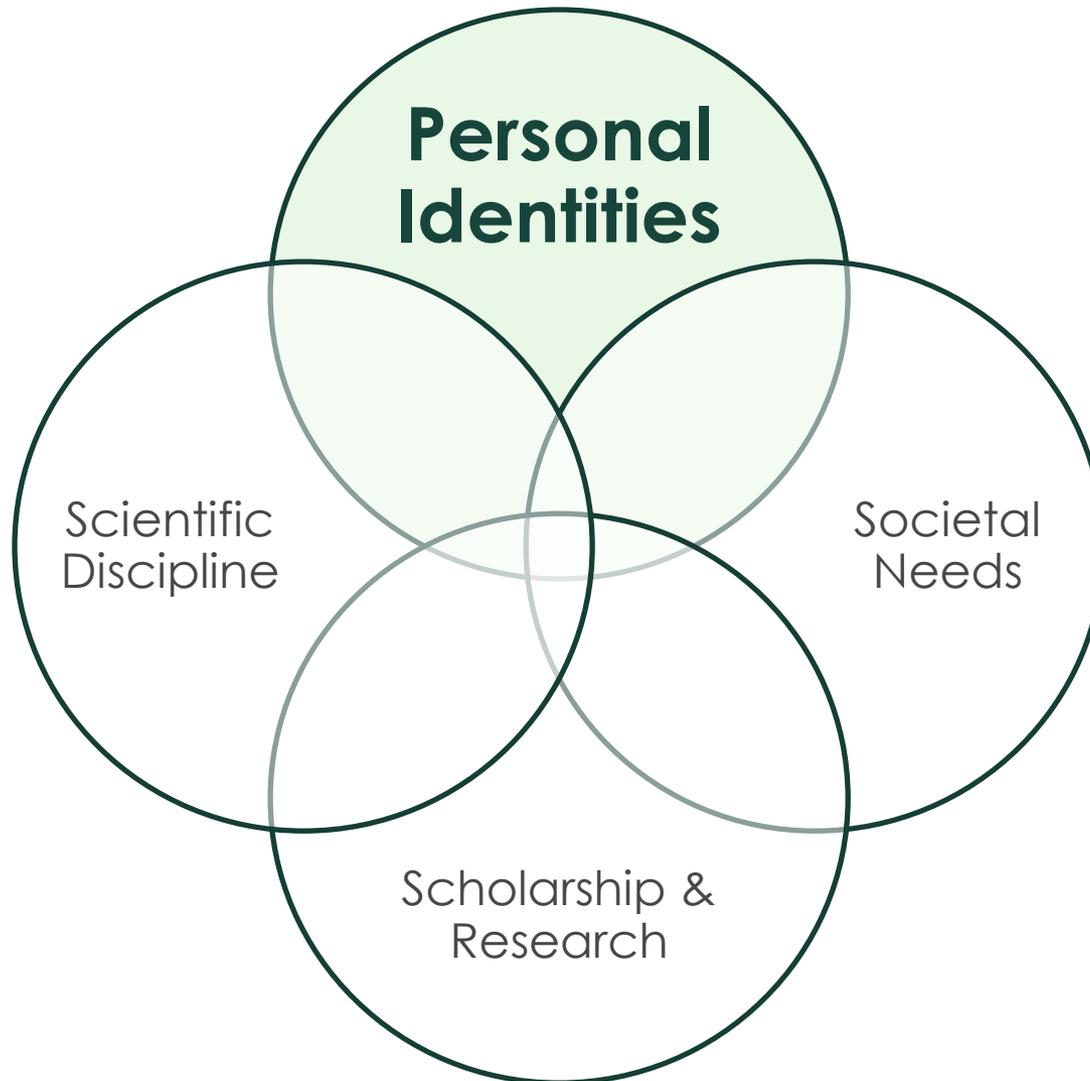
- **On your own (15 mins):** Write a 3-sentence Research Impact Statement that addresses the following:
  - What questions drive **my research**?
  - What **societal needs** does my research address?
  - What **societal impacts** do I hope to achieve?
- **Together (15):**
  - Brief Introductions
  - Share Research Impact Statements for feedback on clarity and feasibility

# Beyond Your Research Identity



Thinking about other elements of your identity beyond your research identity helps you identify **points of connection, shared interests, and shared values** between you and potential audiences and populations.

# Identities, Preferences and Interests



# Personal Identities



SOCIAL  
IDENTITIES



PERSONAL  
PREFERENCES



PERSONAL  
INTERESTS

# Social Identities

Race

Ethnicity

Sexual Orientation

Gender Identity

Ability

Religion/Spirituality

Nationality

Socioeconomic  
Status



## Activity 2: My Social Identities (5 mins)

On your own: How do your social identities influence your Research Identity?

- How do they influence **what** you choose to study or **how** you choose to study it?
- How do they influence the **impacts** you hope to have with your research?



# Your preferences

- Do you prefer:
  - Engaging directly with the public or at a distance?
  - Interacting with children or adults?
  - Free-form or highly structured activities?
  - Indoor or outdoor activities?
  - Busy or quiet settings?
  - Large or small groups?
  - Fast or relaxed pace?
  - Working in teams or alone?

# Your Interests



- Sports and Fitness
- Reading
- Gaming
- Gardening
- Cooking
- Spending time with friends
- Listening to music
- Playing an instrument
- Drawing or painting
- Traveling
- Watching Movies
- Crafting
- Volunteering
- Political Activism



# Connect Example

Engages participants in horticulture job training in discussions about xeriscaping

**STEM**  
**AMBASSADOR**

Studies water conservation

&

Interested in social justice



# Activity 3. My Preferences and Interests

## On your own (5 mins)

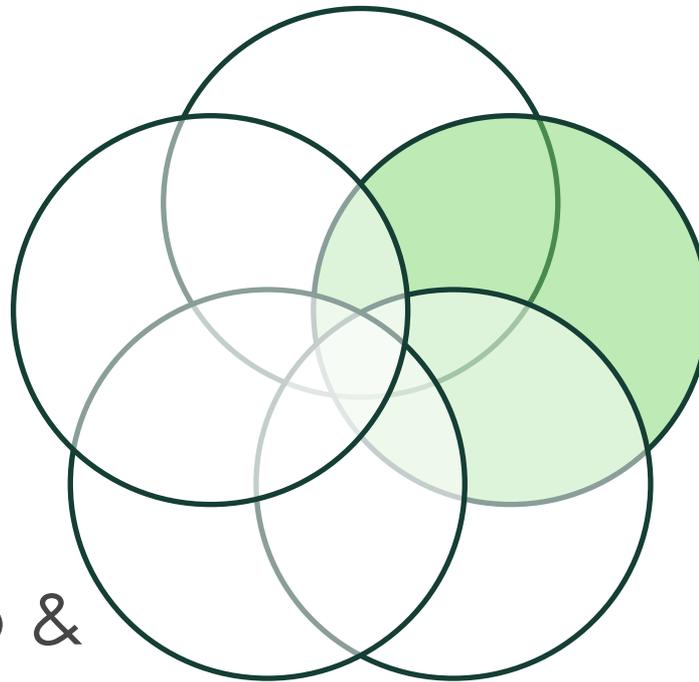
- Indicate your preferences on your worksheet
  - What do your **preferences** suggest about the types of activities that would be rewarding for you, your partners, and your audiences?
- List your interests on your worksheet
  - What do your **interests** suggest about possible points of connection with partners and public audiences?

# Capacities and Skills

Personal  
Preferences

Scientific  
Discipline

**Capacities  
and Skills**



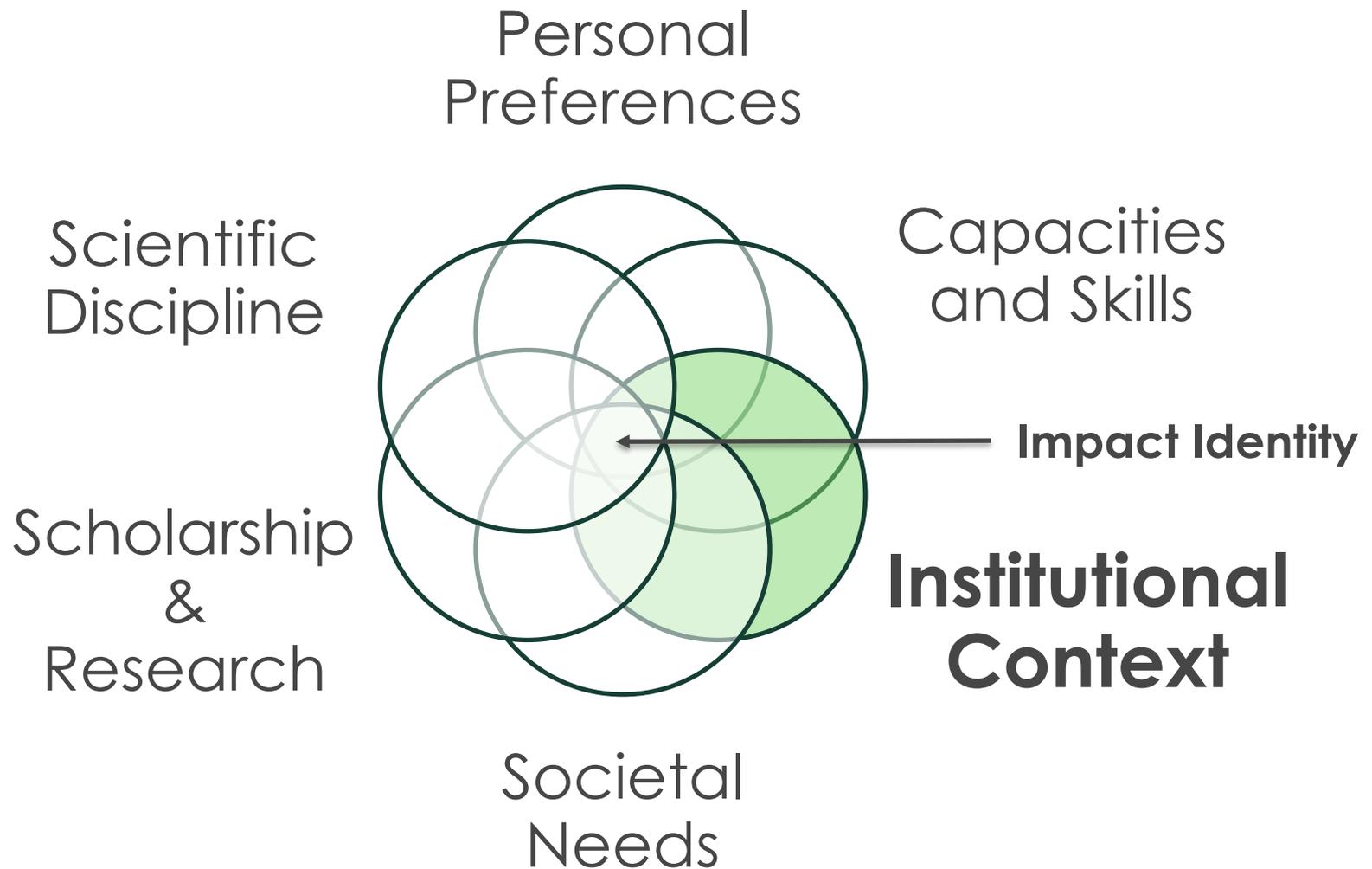
Scholarship &  
Research

Societal  
Needs

## Activity 4. My Capacities & Skills (5 mins)

- What **capacities or skills** do I have that will enable me to achieve my desired impacts?
  - Am I an effective science communicator?
  - Am I more gifted as a speaker or as a writer?
  - Am I better at working with children or adults?
  - Am I skilled at working with diverse audiences?
  - Am I good at designing hands-on activities for public audiences?
- If I don't (yet) possess a capacity or skill that is essential for the BI activity I want to do, **who can I partner with** who can bring these skills to the table?

# Institutional Context



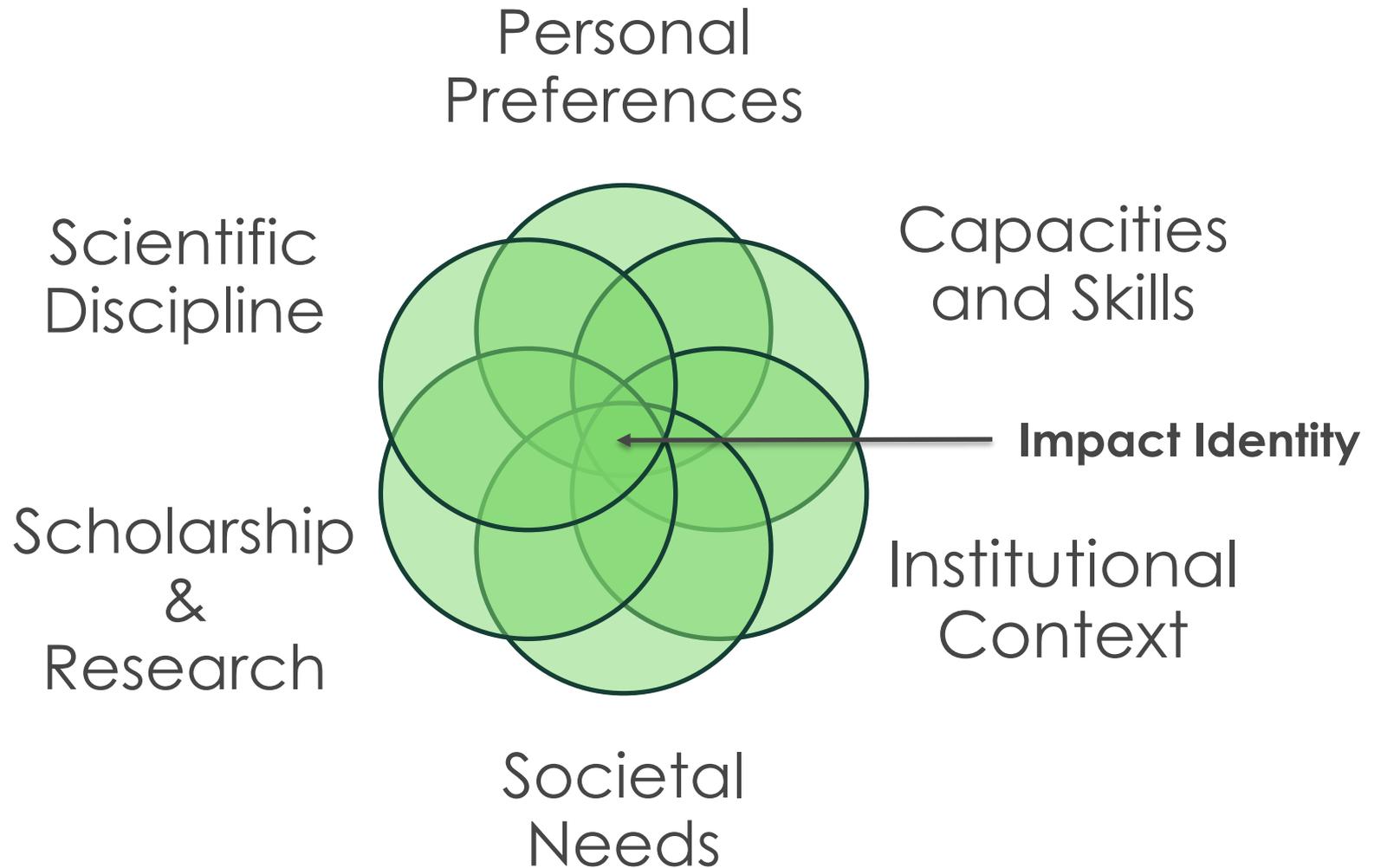
Adapted from Risien & Storksdiel, 2018



# MSU BI Partners for Public Engagement

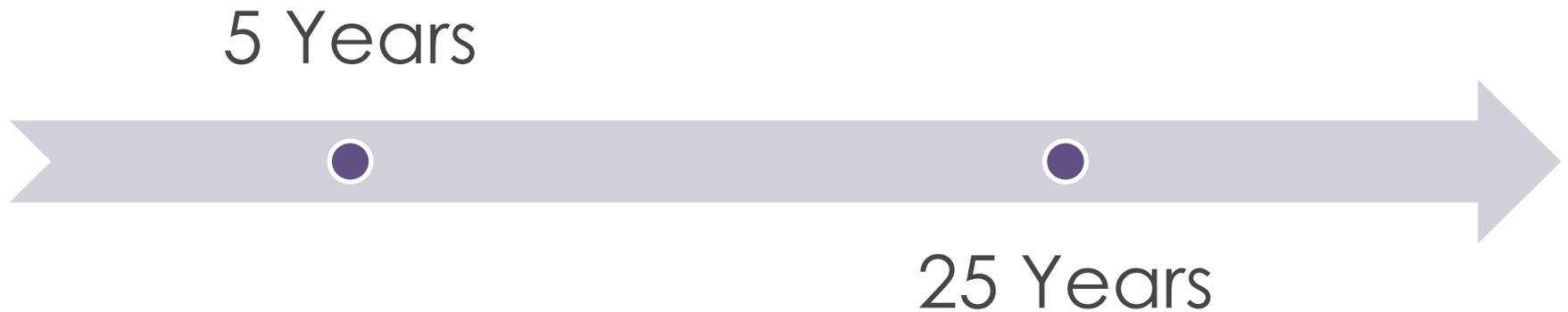
- Arts and Culture (Broad Art Museum)
- Broadening Participation in STEM
- Citizen Science Projects (Michigan Pollinator Initiative)
- Informal Science Education (e.g., Museum, Planetarium)
- K-12 Outreach
- MSU Extension
- MSU Innovation Center
- Science Communication
- Undergraduate Research
- University Outreach and Engagement
- WKAR Public Media
- **Other faculty who are experienced with public engagement**
- **(See Handout for more)**

# Your Impact Identity is Your Asset Map!



Adapted from Risien & Storksdiel, 2018

# Impacts Across Your Career



- What will my **impact legacy** be?
- What is my **plan** for achieving it?
- What **assets and resources** will I use?
- **Start small** and build on early successes.



# Activity 5. My Impact Plan (30 min)

## On your own (20 mins)

- **Goals:** Review your Research Impact Statement from Activity 2. What are your impact goals?
- **Activities:** What processes or sequence of activities will enable you to achieve the impacts listed in your RI Statement?
- **Assets:** What assets (people, programs, partners, interests, skills, and other resources) do you already have that will help you achieve your impact goals?
- **Needs:** What other people, programs, partners, and skills will you need to reach your goals?
- **Next:** What next step will you take toward achieving your impact goals? (e.g., call/email a potential partner)

## Share (10 mins)

# Logic Model

<b>INPUTS</b>	<b>ACTIVITIES</b>	<b>OUTPUTS</b>	<b>SHORT-TERM OUTCOMES</b>	<b>INTERMEDIATE OUTCOMES</b>	<b>LONG-TERM OUTCOMES/ IMPACTS</b>
<b>Resources essential to carry out project activities</b>	<b>What the project does</b>	<b>Immediate products of activities</b>	<b>Changes in awareness, attitudes, knowledge</b>	<b>Changes in behavior</b>	<b>Changes in the status or condition of people or communities</b>
List essential resources necessary to carry out project activities	List key activities	List immediate outputs	Describe expected short-term changes in awareness, attitudes or knowledge	Describe expected medium-term changes in behavior	Describe expected long-term changes in the status or condition of people and communities

# BI Supports & Resources

# ARIS Broader Impacts Toolkit



The resources and tools on this site are designed to help Researchers and BI Professionals develop projects and partnerships that will satisfy the Broader Impact requirement of National Science Foundation (NSF) proposals, and help you fulfill your interest in communicating your science.

This site is brought to you by the [Center for Advancing Research Impact in Society \(ARIS\)](#) and [Rutgers University](#).



## Guiding Principles

What does NSF require?

Get a high-level overview of societally relevant outcomes and review criteria specified by NSF



## Planning Checklist

What elements are needed in a BI project?

Use this list to review the key elements of an effective BI project proposal



## BI Wizard

How do I develop my BI project proposal?

Our wizard will walk you through all of the key steps to building partnerships and effective projects



## BI Project Rubric

How do I assess my project's potential?

Use this rubric to help you evaluate a Broader Impact project plan



# Broader Impacts Resources



[Overview](#)



[Create BI Plan](#)



[MSU Partners for BI](#)



[Training Materials](#)



[Resources](#)



[Contact](#)

## University Outreach & Engagement BI page



<https://engage.msu.edu/ways-to-engage/broader-impacts-resources>

# Upcoming Workshops

Date	Topic
Oct 26	Core Components of a Successful Broader Impacts Plan
Nov 16	Broader Impacts Writing Retreat
Mar 2024	Winning Strategies for NSF CAREER Proposals



# BI Consultation Resources @ MSU

- **Office of Research and Innovation**
  - **Sara Steenrod** (steenro6@msu.edu)
  - **Lauren Aerni-Flessner** (aernifl@msu.edu)
- **University Outreach and Engagement**
  - **Miles McNall** (mcnall@msu.edu)
- **MSU Museum**
  - **Denice Blair** (dblair@msu.edu)

# Questions



# Evaluation Survey



# References

- Nadkarni, N. M., Weber, C. Q., Goldman, S. V., Schatz, D. L., Allen, S., & Menlove, R. (2019). Beyond the deficit model: The ambassador approach to public engagement. *BioScience*, 69(4), 305-313.
- Risien, J., & Storksdieck, M. (2018). Unveiling impact identities: A path for connecting science and society. *Integrative and comparative biology*, 58(1), 58-66.
- Simard, S. (2021). *Finding the mother tree: uncovering the wisdom and intelligence of the forest*. Penguin UK.