



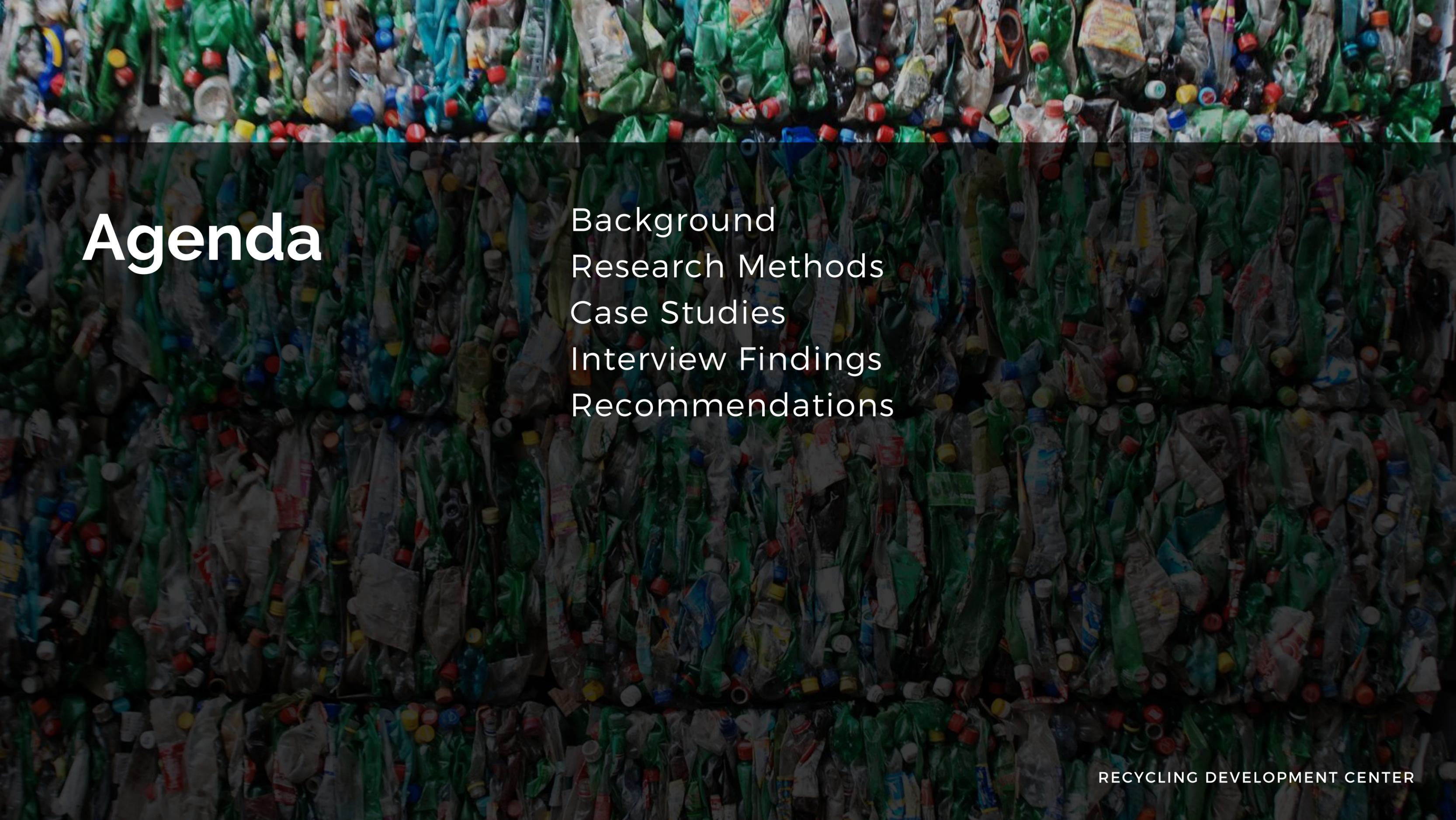
Washington Department of Ecology

RECYCLING DEVELOPMENT CENTER

W

EVANS SCHOOL
OF PUBLIC POLICY & GOVERNANCE

UNIVERSITY *of* WASHINGTON



Agenda

Background
Research Methods
Case Studies
Interview Findings
Recommendations

CHINA NATIONAL SWORD

New challenges for finding
recycling end markets



HB 1543

Established a Recycling
Development Center

Methods

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Research Questions

- What are the staffing needs, organizational objectives, and tasks for the Center?
- What recoverable materials do markets demand?
- What materials and recycling processes are the most environmentally and economically beneficial?
- What regional partnership models can the Center implement?



Research Methods

Qualitative Approach:

- Case studies of 11 approaches
- Semi-structured interviews of 31 industry professionals



Organizations Interviewed

Public Sector

Arizona State University
CalRecycle
Chelan County
City of Olympia
Island County
King County
Oregon DEQ
RRS - Consultant for Colorado's
NextCycle
Seattle Public Utilities
Shoreline Public Works
Skagit County Public Works
Snohomish County
Utilities and Transportation
Commission (UTC)
Washington Department of
Commerce

Private Sector

Clean Washington Center
PNWER
Recycling Partnership
Southeast Recycling
Development Council
Sustainable Packaging
Coalition
Zero Waste Washington

Partnerships/Non-Profiits

Lautenbach Recycling
Pioneer Recycling
Recology
Resource Synergy
Sunshine Disposal & Recycling
Waste Management



Case Studies

- Clean Washington Center
- CalRecycle
- NextCycle
- Southeast Recycling Development Council (SERDC)
- Northeast Recycling Council
- Recycling Council of British Columbia
- Chicago Board of Trade Recyclables Exchange
- Beyond 34
- Alabama Recycling Partnership
- Arizona State University RISN Incubator



Interview Findings

Materials
Recycling Development Center
Partnerships
Financial Assistance
Research
Policy
Contractual Assistance
Communications Support



Recyclable Materials

- Paper products
- Plastics
- Glass
- Metals - steel and aluminum
- Organics



Paper Products

- Corrugated cardboard, newspaper, and mixed paper
- Most impacted by China National Sword
- Some interviewees suggested prioritizing improvements to sorting or existing WA mills
- Support use of recycled paper products in green building (high potential to replace virgin)



Plastics

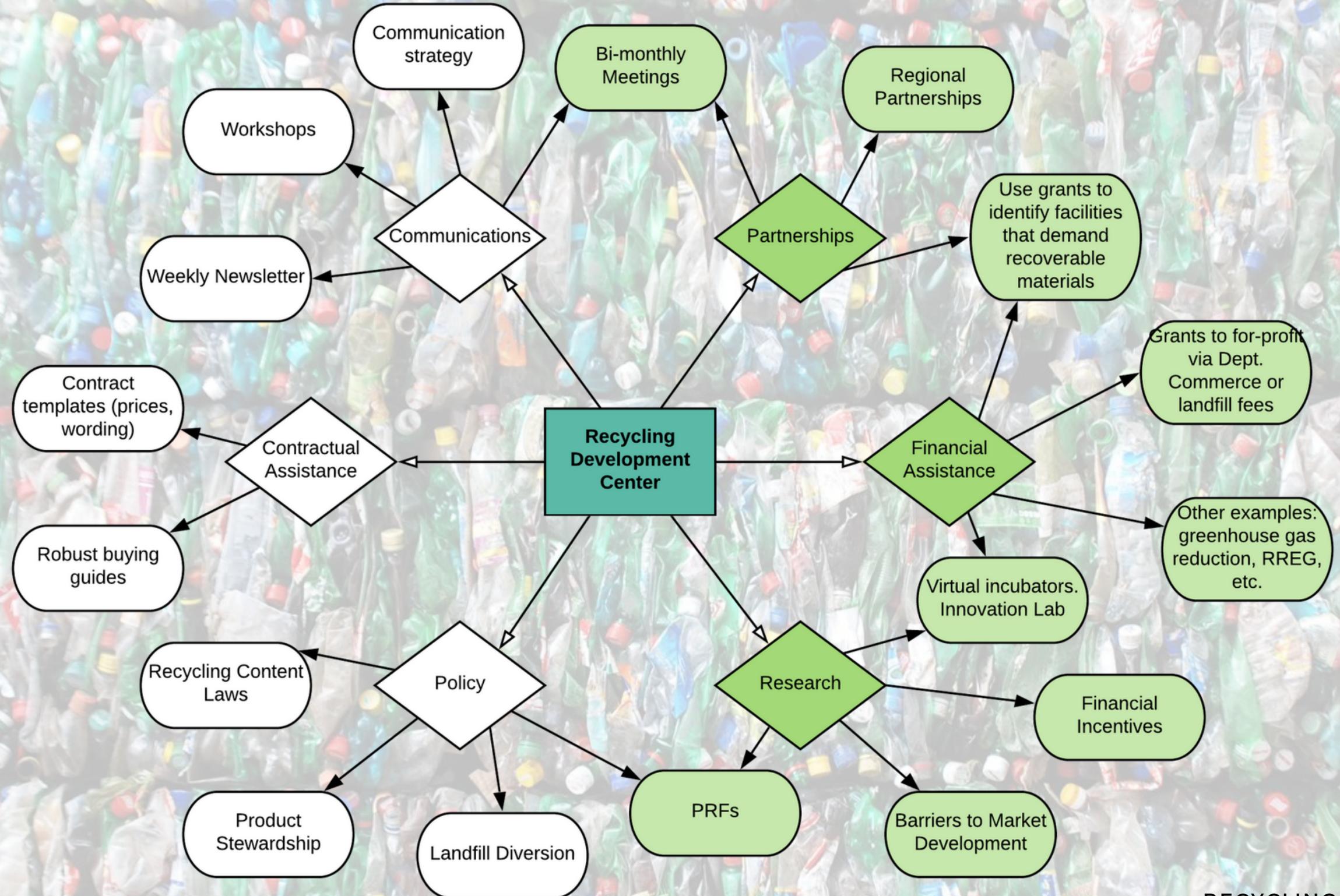
- #1-#2 and #3-#7
- Significant environmental concerns
- Strong export markets for some plastics but prone to volatility
- Interviewees discussed need for additional sorting and processing infrastructure
- Opportunities in green building



Glass, Metals, Organics

- Secondary concerns for the region
- Glass - heavy, breaks easily, three colors. Some interviewees noted the success of bottle bills or separate bins
- Metals - strong markets
- Organics - several interviewees suggested looking at East/West WA

Recycling Development Center





Partnerships

INFORMATION EXCHANGE

COORDINATED EDUCATION
CAMPAIGN

REGIONAL STRATEGY WITH
BRITISH COLUMBIA AND
OREGON



Financial Assistance

LIMITATIONS DUE TO WASHINGTON
STATE CONSTITUTION

OPPORTUNITIES FOR PUBLIC
PROJECTS

POTENTIAL FOR TAX INCENTIVES



Research

PLASTIC RECOVERY FACILITIES

BARRIERS TO MARKET
DEVELOPMENT

FINANCIAL INCENTIVES

Case Studies

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Clean Washington Center



BACKGROUND

- HB 5591 (1990)
- Primary goal: support new recycling markets
- Sunset in 1997

LESSONS/RECOMMENDATIONS

- Work with staff who oversee day-to-day operations
- Develop strong relationships with businesses
- Create a safe place for stakeholders to come together

ORGANIZATIONAL STRUCTURE

- 24 FTE across five departments
- Department of Trade and Economic Development



ASU RISN Incubator

BACKGROUND

- Partnership between City of Phoenix and Arizona State University
- Accelerator for small waste-to-product businesses
- Goal is to promote a circular economy in Phoenix

LESSONS/RECOMMENDATIONS

- Consider an intergovernmental partnership for management and physical space
- Focus on bringing in national businesses to address multiple needs
- Make the municipal waste stream accessible to ventures

ORGANIZATIONAL STRUCTURE

- Managed by sustainability program at ASU
- City provides funding and infrastructure
- City owns the RIC land and manages the leases

Colorado NextCycle

BACKGROUND

- 6-month business incubator
- Offers seed funding and technical/business assistance

LESSONS/RECOMMENDATIONS

- Allows time for a company to better develop its business plan before seeking larger grants
- Provides a platform to share business and technical knowledge

ORGANIZATIONAL STRUCTURE

- Overseen by Department of Public Health & Environment and run by a consultant





Southeast Recycling Development Council (SERDC)

BACKGROUND

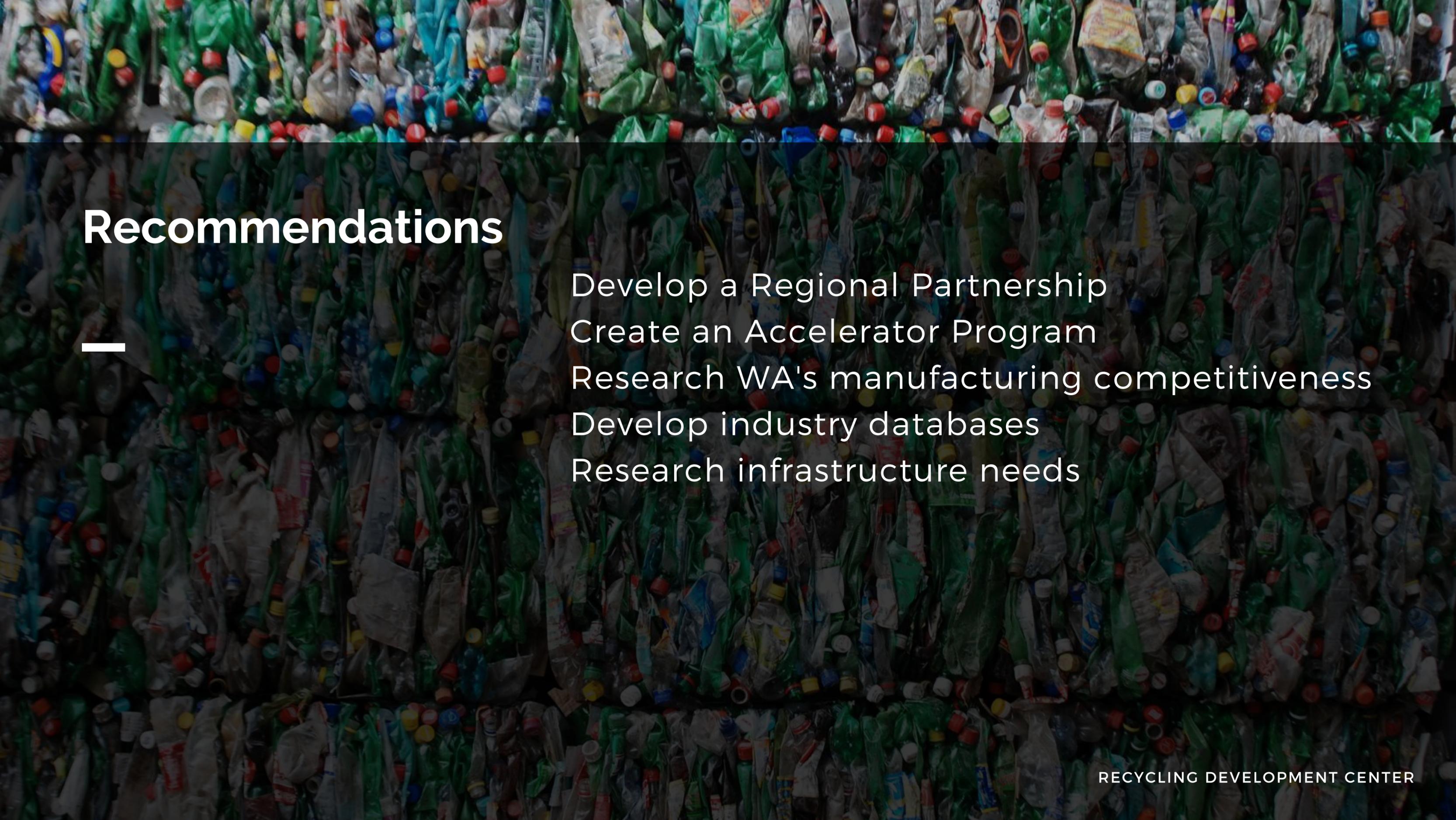
- An 11-state organization striving to increase collection and recovery of quality recyclable materials in the south east.

LESSONS/RECOMMENDATIONS

- Provide financial assistance through grant programs
- Create regional recycling partnerships

ORGANIZATIONAL STRUCTURE

- Nonprofit consisting of an executive committee, a general board, an ex officio committee, and 2 staff



Recommendations

- Develop a Regional Partnership
- Create an Accelerator Program
- Research WA's manufacturing competitiveness
- Develop industry databases
- Research infrastructure needs



Develop a Regional Partnership

TASKS

- Determine regional partnership model.
- Consider British Columbia and Oregon as partners.
- Delegate roles for RDC staff in regards to managing the partnership.



Create an Accelerator Program

TASKS

- Review 2016 Waste Characterization Study to prioritize feedstock for accelerator program
- Research and develop a pilot intergovernmental partnership.
- Research feasibility of a physical space to house accelerator
- Develop a national RFP process
- Recruit a diverse group of businesses that address current and future waste needs in the state



Research Washington State's Manufacturing Competitiveness

TASKS

- Interview manufacturers and recycling processing facilities to understand barriers to entry.
- Compare these barriers to other states and countries.
- Locate opportunities to improve Washington's relative attractiveness.



Develop Two Public Databases to Connect Industry Stakeholders

TASKS

- Build two databases.
- Make these databases public.
- Develop an online forum.
- Expand the databases to include facilities in surrounding states.



Research Infrastructure Needs

TASKS

- Research existing plastics recovery facilities (PRFs).
- Review economic assessment.
- Contact Oregon DEQ to discuss Pacific Northwest partnership.
- Consider siting close to a densely populated area.



Future Considerations

EDUCATION

Contamination levels, Proper recycling, Reducing, Concept of Recycling as a manufacturing good

POLICY ASSISTANCE

Mandatory recycling content, PRFs, Product stewardship, and Landfill diversion.

CONTRACTUAL ASSISTANCE

Buying guides, Contractual templates

Thank you

IF YOU WOULD LIKE A COPY OF THE REPORT,
PLEASE EMAIL KATHERINE AT KWALTON@UW.EDU

