

# Pollution Prevention (P2) Finance Forum

A Project of EPA's EFAB and P2 Program



## RESOURCE PACKET

### ACCESSING CAPITAL: CHALLENGES FOR P2 FINANCING

### P2 FINANCE FORUM WORKSHOP AGENDAS

- [Workshop 1: Setting the P2 Stage and Exploring Financial Structures](#)
- [Workshop 2: Tools and Loan Structuring Strategies](#)
- [Workshop 3: Partnership Models and Distribution Networks](#)

*\*Note: Workshop recordings and written summaries are posted here:*

<https://www.epa.gov/waterfinancecenter/environmental-financial-advisory-board-efab-pollution-prevention-finance-forum>

### WORKSHOP PRESENTERS

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# ACCESSING CAPITAL: CHALLENGES FOR P2 FINANCING

## What is P2?

Pollution prevention (P2), also called “source reduction,” is any practice that reduces, eliminates, or prevents pollution at its source and prior to recycling, treatment, or disposal. Some examples of P2 are shifting to use less hazardous materials, implementing process changes to more efficiently use materials, and reducing the use of energy or water.

## The Benefits of P2

Reducing the amount of pollution produced means less waste to control, treat, or dispose of. Less pollution means fewer hazards posed to human health and the environment. P2 can help promote innovation and resource use efficiency, which in turn can provide enduring benefits and help businesses save money. In addition, for businesses, it’s often cheaper to prevent pollution than to clean it up afterwards or pay for control, treatment, and disposal of waste products. If a business can reduce or eliminate such expenditures, that translates to its bottom line—reducing operating, regulatory, and liability costs. However, many projects that would help businesses implement P2 practices can have capital costs that require upfront expenditures to purchase equipment or make physical process changes. For example, in the manufacturing sector, P2 projects can include:

- Modifying a production process to use fewer materials or to produce less waste
- Installing a solvent refill system that reduces overflow or captures overflow for reuse without contamination
- Investing in technology to improve process efficiency, which saves water and energy
- Switching out product packaging to reduce the amount of packing-related waste

Sometimes businesses can cover costs of P2 modifications by coordinating them with other large-scale capital projects. In other cases, businesses fund improvements from the cost-savings generated by low-cost P2 projects. Some businesses seek to fund the projects through government grants. Many businesses, however, may not have access to funds needed to plan and implement P2 projects, particularly those requiring upfront purchases of new equipment or more expensive outlays for altering production processes, which can be a barrier to implementation.

## Tools for Financing P2 Projects

As noted above, P2 projects often have costs (e.g., new equipment, contractor services) that require cash disbursements upfront, with potential savings (avoided costs) accruing over time. For small and medium-sized enterprises (SMEs), these projects often compete for limited resources with other internal business priorities that are essential for revenue generation. SMEs may not be used to borrowing money from external sources or may not realize that it’s possible to do so at affordable terms. To determine whether an SME qualifies for financing, traditional lenders review factors such as cash on hand, credit history and outstanding debts, and past and anticipated revenue. SMEs that are not able to demonstrate sufficient collateral assets and prospects for on-going revenue generation may be regarded as risky investments and either be denied financing or offered less attractive loan terms (e.g., higher interest rates).

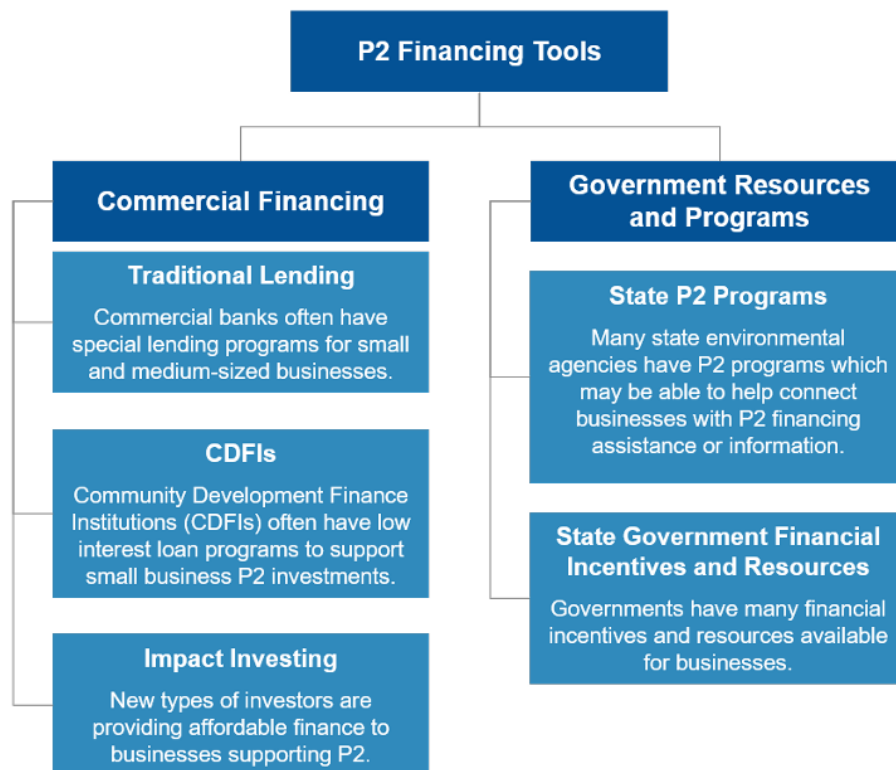
Lenders can make loans for P2 investment more accessible to SMEs by using a variety of techniques to lower or spread financial risk in ways that enable them to reduce the borrower’s cost of financing (e.g., with lower interest rates and/or longer payback periods to reduce the size of regular loan payments). P2 financing tools can make small business loans more attractive to lenders.

## Financing Options

There are a variety of financing options for businesses seeking funding for P2 projects.

- Commercial financing: traditional lending (i.e., commercial banks), Community Development Finance Institutions (CDFIs), and impact investing.
- Government resources and programs: state P2 programs and state government financial incentives and resources (e.g., P2 loans or grants).
- Green Banks: these entities work with private sector investors to create low-cost, long-term financing to maximize the use of public funds.

Utilizing these financing options can help SMEs overcome barriers typical to financing P2 projects, helping reduce pollution at its source and increase efficiency from a waste, disposal, and resource perspective.



## P2 Financing Tips

- Clearly assess operations and maintenance (O&M) costs, project financial savings, and calculate return on investment (ROI) to establish for lenders it is a wise investment.
- Be prepared to clearly outline the environmental benefits of the pollution reduction that would result.
- Talk with your [state's P2 program](#), as they may be able to provide examples of how others have approached the P2 improvement. This can be used to establish to potential lenders that the approach has been implemented by others and that it works. This can help to reduce uncertainty and answer lenders' questions.

# P2 FINANCE FORUM WORKSHOP AGENDAS

U.S. Environmental Protection Agency  
Environmental Financial Advisory Board (EFAB)  
Pollution Prevention (P2) Workgroup

P2 Finance Forum – Workshop #1 Public Meeting  
Location: Virtual via Zoom

Wednesday, March 9, 2022 | 12:00-1:30 pm Eastern Time

The P2 Finance Forum is a series of webinars that explore opportunities and challenges in financing sustainability, with an initial focus on advancing opportunities for small and medium-sized manufacturing businesses.

The purpose of this first Forum webinar is to define the common types of P2 projects relevant to small businesses and manufacturers, characterize the barriers and risks facing businesses and lenders for P2 projects, and explore financing mechanisms and structures that are well-suited to overcome these barriers and risks to enhance financing for P2 projects.

P2, also known as source reduction, is any practice that reduces, eliminates, or prevents pollution at its source prior to recycling, treatment, or disposal. For more information, visit <https://www.epa.gov/p2>.

## Agenda

|                 |   |
|-----------------|---|
| <b>12:00 pm</b> | Welcome and Member Roll Call <ul style="list-style-type: none"><li>Edward H. Chu – EFAB Designated Federal Officer; Deputy Regional Administrator, EPA Region 7</li></ul>   |
| <b>12:05 pm</b> | Workshop Purpose and Agenda <ul style="list-style-type: none"><li>Ashley Allen Jones – Chair, EFAB Pollution Prevention Workgroup; Founder and CEO, i2 Capital</li></ul>  |
| <b>12:10 pm</b> | Setting the P2 Stage <ul style="list-style-type: none"><li>David Widawsky – Division Director, EPA Office of Chemical Safety and Pollution Prevention</li></ul>   |
| <b>12:20 pm</b> | Financial Structures Panel <ul style="list-style-type: none"><li>Moderator: Craig Hrinkevich – Member, EFAB Pollution Prevention Workgroup; Managing Director, Baird</li><li>Kelsie Bouchard – Portfolio Manager, Coastal Enterprises, Inc.</li><li>Jeremy Gilpin – Executive Vice President, Greater Commercial Lending</li><li>Matt McKenna – Executive in Residence, Rural Opportunity Initiative</li><li>Aldric Seguin – Managing Partner, Global Sustainable Futures</li></ul> |
| <b>1:10 pm</b>  | Q&A with EFAB   |
| <b>1:25 pm</b>  | Wrap Up <ul style="list-style-type: none"><li>Kerry O’Neill – Chair, EFAB; CEO, Inclusive Prosperity Capital</li></ul>  |
| <b>1:30 pm</b>  | Adjourn   |

U.S. Environmental Protection Agency  
Environmental Financial Advisory Board (EFAB)  
Pollution Prevention (P2) Workgroup

P2 Finance Forum – **Workshop #2 Public Meeting**  
Location: Virtual via Zoom

Tuesday, May 10, 2022 | 12:00-1:30 pm Eastern Time

The P2 Finance Forum is a series of webinars that explore opportunities and challenges in financing sustainability, with an initial focus on advancing opportunities for small and medium-sized manufacturing businesses.

This Forum is designed to build on the first Forum to explore various tools and loan structuring strategies that may be well-suited to support P2 projects at SMEs or which could inform development or adaptation of other successful models for expanding financing capacity to SMEs. The session will also explore potential opportunities to “piggyback” on existing and innovative models (eg. ESCOs) to enhance financial support for P2. Our participants are well versed in standards & certification, energy- as-a-service contracts and organizations, and C-Pace financing models, among other broad areas of expertise.

## Agenda

|                 |   |
|-----------------|---|
| <b>12:00 pm</b> | Welcome and Member Roll Call <ul style="list-style-type: none"><li>Edward H. Chu – EFAB Designated Federal Officer; Deputy Regional Administrator, EPA Region 7</li></ul>   |
| <b>12:05 pm</b> | Introduction and Setting the Context <ul style="list-style-type: none"><li>Moderator: Stacy Brown – President and CEO, Freberg Environmental</li><li>EFAB Charge: Ashley Allen Jones – Chair, EFAB Pollution Prevention Workgroup; Founder and CEO, i2 Capital</li><li>EPA P2 Program: David Widawsky – Division Director, EPA Office of Chemical Safety and Pollution Prevention</li></ul> |
| <b>12:15 pm</b> | Panelist Remarks <ul style="list-style-type: none"><li>Catherine Sheehy – Global Lead of Sustainability Partnerships, UL</li><li>Brad Fletcher – Vice President &amp; Treasurer, Illinois Finance Authority</li><li>Bert Hunter – Executive Vice President and Chief Investment Officer, CT Green Bank</li></ul>  |
| <b>1:00 pm</b>  | Discussion <ul style="list-style-type: none"><li>Moderator: Stacy Brown</li></ul>   |
| <b>1:25 pm</b>  | Wrap Up   |
| <b>1:30 pm</b>  | Adjourn   |

U.S. Environmental Protection Agency  
Environmental Financial Advisory Board (EFAB)  
Pollution Prevention (P2) Workgroup

P2 Finance Forum – **Workshop #3 Public Meeting**  
Location: Virtual via Zoom

Tuesday, August 23, 2022 | 12:00-1:30 pm Eastern Time

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The P2 Finance Forum is a series of webinars that explore opportunities and challenges in financing sustainability, with an initial focus on advancing opportunities for small and medium-sized manufacturing enterprises (SMEs).

This Forum is designed to build on the first two Forums to explore partnership models and distribution networks that EPA could leverage to support expanded access to financing for P2 projects at SMEs. The session will delve into how various state, community development financial institution (CDFI), and original equipment manufacturer (OEM) programs are working to address small and medium-sized business financing needs that could be relevant to capital equipment and process improvement projects.

Our guest speakers will represent four typologies of partnership models and distribution networks. They will come to the discussion with years of experience working with state programs, trade associations, CDFIs and OEMs representing a variety of industrial sectors.

## Agenda

|                 |   |
|-----------------|---|
| <b>12:00 pm</b> | Welcome and Member Roll Call <ul style="list-style-type: none"><li>Edward H. Chu – EFAB Designated Federal Officer; Deputy Regional Administrator, EPA Region 7</li></ul>   |
| <b>12:05 pm</b> | Introduction and Setting the Context <ul style="list-style-type: none"><li>EFAB Charge: Ashley Allen Jones – Chair, EFAB Pollution Prevention Workgroup; Founder and CEO, i2 Capital</li><li>EPA P2 Program: David Widawsky – Division Director, EPA Office of Chemical Safety and Pollution Prevention</li></ul>                   |
| <b>12:15 pm</b> | Panelist Remarks <ul style="list-style-type: none"><li>Martin Chilcott – CEO and Founder, Manufacture 2030</li><li>John Cox – Principal, John Cox Consulting</li><li>Sarah Lee – Project Director, Advanced Manufacturing Sector Integration, Washington State Department of Commerce</li><li>Frank Altman – CEO, CRF USA</li></ul> |
| <b>1:00 pm</b>  | Discussion <ul style="list-style-type: none"><li>Moderator: Ashley Allen Jones</li></ul>  |
| <b>1:25 pm</b>  | Wrap Up   |
| <b>1:30 pm</b>  | Adjourn   |

## P2 FINANCE FORUM WORKSHOP SERIES PRESENTERS

### EFAB



**Kerry O'Neill – Chair, EFAB; CEO, Inclusive Prosperity Capital**

Kerry E. O'Neill is the Chief Executive Officer of Inclusive Prosperity Capital Inc., a nonprofit investment fund that was spun out of the Connecticut Green Bank in 2018 to scale up impact for underserved communities and underinvested markets across the country. Inclusive Prosperity Capital operates at the intersection of community development, clean energy finance, and climate impact using a collection of products and strategies that match capital supply with project demand through partners on the ground. Prior to joining IPC, O'Neill led the residential energy financing programs at the Connecticut Green Bank, a state entity that works with private-sector investors to create low-cost, long-term sustainable financing for clean energy to maximize the use of public funds. Her work at the Connecticut Green Bank has given her insight into the institutional challenges – and opportunities – associated with clean energy investing for underserved communities. O'Neill earned a B.S. in computer science and engineering from MIT and a M.S. from NYU Tisch School of the Arts' Interactive Telecommunications Program.



**Ashley Allen Jones – Chair, EFAB Pollution Prevention Workgroup; Founder and CEO, i2 Capital**

Ashley Allen Jones is a business and investment executive leading environmental finance innovation across the water and agricultural sectors. She specializes in bridging the gap between public, private, and philanthropic approaches to conservation, with the distinct goal of dramatically expanding sustained funding for conservation. Ms. Allen Jones is a dynamic finance professional with expertise across private equity, venture capital, and investment banking, and has a proven track record of working at the dynamic intersection of finance and social change. Prior to founding i2 Capital, she co-founded the Endeavor Group, a global consultancy that manages the priority business and philanthropic investments of multiple family office principals. She also was a Principal at Women's Growth Capital Fund, a gender-lens venture fund. Her corporate finance experience includes mergers & acquisitions, private financings, and initial public offerings with Alex. Brown & Sons (Deutsche Bank), Coopers & Lybrand (Price Waterhouse Coopers), and Quarterdeck Investment Partners (Jeffries). Ms. Allen Jones has a B.A. in American Studies from the University of Colorado and a M.B.A. in finance from the McDonough School of Business at Georgetown University.



**Craig Hrinkevich – Managing Director, Baird**

Craig Hrinkevich joined Baird in 2019 with more than 25 years of municipal finance experience. He has a broad range of experience and diverse banking, credit, sales, and structuring expertise, including working with a variety of issuer and debt types (e.g., states, state agencies, bond banks, state revolving funds, general obligation, appropriation, moral obligation, asset securitizations, public and private higher education and not-for-profits, healthcare, municipal and investor-owned electric and water/sewer utilities, local towns, cities and school districts and transportation entities). He has developed creative financing solutions for a variety of high-profile and local issuers in the Northeast region and throughout the country. Prior to joining Baird, Hrinkevich served in various public finance investment banking roles at Wells Fargo Securities, Wachovia Securities, A.G. Edwards & Sons, Inc., and First Albany Corporation. Hrinkevich earned a bachelor's degree in political science from Rutgers College, and a master's degree in governmental administration from the University of Pennsylvania.



### **Stacy Brown – President & CEO, Freberg Environmental**

Stacy brings almost 30 years of experience in the insurance and environmental consulting industry to his role as President & CEO of FEI. He joined Freberg in 1998 and has served as president for the past nine years. Stacy was hired to develop FEI's site-specific pollution (EIL) program. Since program inception in 2001, the EIL program has developed into one of FEI's most profitable programs. Additionally, Stacy has developed and brought to market several new insurance programs, including architects and engineers' professional liability, site specific pollution, petroleum storage tank, products pollution, and excess auto liability. Stacy is the co-author of an

award-winning loss control book, *Understanding and Managing Risk: A Handbook for Environmental Consultants and Contractors*. He brings a wide range of insurance, environmental and construction experiences to FEI. Stacy's career includes work with a NYSE-listed engineering firm, the U.S. Forest Service, and a municipal waste authority. Prior to joining FEI in 1998, he spent eight years as an environmental scientist and project manager for Dames & Moore (now URS), a large multi-national environmental and engineering firm.

EPA Leadership

### **Chris Meister – Executive Director, Illinois Finance Authority (Former EFAB P2 Workgroup Member)**

Chris has served as Executive Director of the Illinois Finance Authority, Illinois' infrastructure bank, since 2009. Chris serves as the Authority's chief executive officer and has overseen the presentation, approval and closing of over 390 individual transactions, mainly federally tax-exempt conduit bonds involving privately-owned capital projects and publicly owned infrastructure with an estimated dollar value of over \$13.7 billion. Significant achievements include the Triple-A rated (S&P/Fitch) Illinois State Revolving Fund ("SRF") Bonds, Series 2013, which restructured the SRF Program to enable increased leveraging while also representing the first SRF issue in Illinois in nearly 10 years (December 2013); removing nearly \$40 million in contingent State Moral Obligation Bonds through the redemption and cash defeasance of the Authority's Rural Bank Local Government Bond Program (August 2014); and various Recovery Zone Facilities Bonds, including importantly, the Navistar International Corporation conduit transaction (2010).

## **EPA**



### **Edward H. Chu – EFAB Designated Federal Officer; Deputy Regional Administrator, EPA Region 7**

Edward H. Chu is the Deputy Regional Administrator for the Environmental Protection Agency's Region 7 in Lenexa, Kansas. Since arriving at EPA in 1995, Ed has held several key leadership positions, including Designated Federal Officer for the EFAB since 2018. He was the Assistant Regional Administrator for both EPA's Pacific Northwest and Alaska Region (Region 10) and Southeast Region (Region 4), and the Acting Director of EPA's Indoor Air Division, where he developed the Federal Radon Action Plan and championed EPA's asthma programs. As the Director of the Office of Solid Waste and Emergency Response's Center for Program Analysis and the Director of the Land Revitalization Office, he created the Re-Powering

America's Land Program to encourage generation of renewable energy on Brownfield properties. Ed was also a founding member of EPA's Office of Children's Health Protection in 1997, where he developed the first Federal Asthma Strategy for the President's Task Force on Environmental Health Risks and Safety Risks to Children, the first international report on children's health indicators, and the first research program on children's health valuation. Ed served as the Deputy Associate Director for Green Jobs, Community Protection, and Climate Solutions at the White House Council on Environmental Quality, where he led an interagency task force to develop and implement the Recovery Through Retrofit Action Plan for the Vice President and the Middle-Class Task Force. He has degrees from the University of Michigan and Michigan State University.





**David Widawsky, Ph.D. – Division Director, EPA Office of Chemical Safety and Pollution Prevention**

Dr. Widawsky is the Director of the Data Gathering and Analysis Division, in the Office of Chemical Safety and Pollution Prevention at EPA. He provides leadership for the EPA's mission focus on chemical safety and sustainability in the implementation of the Toxic Substances Control Act, the Pollution Prevention Act, and the Emergency Planning and Community Right to Know Act. The multi-disciplinary staff under his leadership provide expertise, analysis, method development, and innovation for several pollution prevention programs at EPA, including grants to states and tribes for working with businesses to promote source reduction and an environmentally preferable purchasing program for federal procurement. He also leads programs in sustainability through safer and sustainable chemistry and chemical products, including EPA's Green Chemistry Challenge Awards and EPA's Safer Choice labeling program for safer chemical products. Dr. Widawsky is a graduate of the University of California with B.Sc. degrees in Political Economy of Natural Resources and in Plant and Soil Biology, received his M.S. in Agricultural Economics from Colorado State University, and earned his Ph.D. in Applied Economics at Stanford University. He has worked at the U.S. EPA since 1998, where he has served in a number of leadership roles across the Agency.

## WORKSHOP 1 SPEAKERS



**Kelsie Bouchard – Portfolio Manager, Coastal Enterprises, Inc.**

Kelsie Bouchard is the Portfolio and Credit Manager at CEI, a CDFI focused on creating good jobs, environmentally sustainable enterprises, and more broadly shared prosperity in Maine and rural regions throughout the U.S. Her role within the lending department includes deal underwriting, portfolio analysis and strategy, risk management, and oversight of lending operations. Prior to joining CEI in the fall of 2019, Kelsie worked as a risk manager at Morgan Stanley in New York City, focusing primarily on counterparty, operational, and new product risk in the equity derivative and secured financing businesses. Growing up in rural northern Maine, Kelsie established a passion for community and economic development. She is deeply proud of her Maine roots. Kelsie graduated from Syracuse University, where she majored in Entrepreneurship and Emerging Enterprises, and the Maxwell School of Citizenship and Public Affairs' undergraduate Policy Studies program.



**Jeremy Gilpin – Executive Vice President, Greater Commercial Lending**

With a background that includes more than two decades in the banking industry, Jeremy has extensive experience delivering guaranteed lending through the USDA B&I, REAP, FSA, USDA 9003, IRP, RLF, and SBA programs. Throughout the past 20 years, he has closed and serviced more than \$900 million in loans. As head of the Greater Commercial Lending team, Jeremy directs all aspects of this division in providing lending solutions to companies. Previously, he led the development and implementation of all commercial services for Greater Nevada Credit Union, the largest USDA business lender in the U.S. Jeremy was also a credit administrator for Washington's oldest community bank and provided USDA and SBA loan services for financial institutions throughout the Midwest. A veteran of the U.S. Army, he served as a personnel officer for the Kansas Army National Guard. Jeremy sits as chairperson of the National Rural Lenders Association, which partners with USDA national directors and political leaders to ensure rural communities maintain access to viable financing options. He is also an active volunteer and serves on the Nevada Advisory Board for the Special Olympics. Jeremy holds a bachelor's degree in finance and military science from Pittsburg State University and is a graduate of the Western States School of Banking Commercial Lending Program.



### **Matt McKenna – Executive in Residence, Rural Opportunity Initiative**

As an Executive in Residence with McDonough School of Business, Mr. McKenna leads the Rural Opportunity Initiative – an effort to foster rural economic development through partnerships between the public and private sectors. He previously served as a Senior Advisor to Secretary of Agriculture Tom Vilsack at USDA, responsible for launching a variety of public-private partnerships focused on bringing capital to rural America, including the Rural Infrastructure Opportunity Fund and the Rural Business Investment Opportunity Initiative. In conjunction with his work at the USDA, he was named a Presidential Executive Fellow. During a 15-year career with PepsiCo, Mr. McKenna held several executive roles, including Sr. Vice

President of Finance and Treasurer. He was also a Director for PepsiAmericas. As President and Chief Executive Officer of Keep America Beautiful, he helped grow the nation’s leading non-profit working with affiliates and over 2 million volunteers to build and sustain vibrant communities across America. Previously, Mr. McKenna was a Partner at Winthrop, Stimson, Putnam, and Robert, focusing primarily on federal income tax issues. Mr. McKenna presently serves as a Partner with Open Prairie, a Rural Business Investment Corporation, an Adjunct Lecturer at Fordham University, and an independent member of the Board of Directors for Foot Locker (NYSE: FL) where he serves as the Financial Expert for the Audit Committee and Chairman of the Finance and Strategic Planning committees. He received a Juris Doctorate and Master of Laws from Georgetown University Law Center and a Bachelor of Arts from Hamilton College.



### **Aldric Seguin – Managing Partner, Global Sustainable Future**

Aldric is a Co-Founder and Managing Partner of Global Sustainable Future (GSF), a middle market finance firm that advances a collaborative approach to sustainability by bringing entrepreneurs, capital, and market access together to address global challenges in Energy, Air, and Water. In addition to his role with GSF, Aldric currently serves as Managing Partner of the Safer World Group and Verde Impact Advisors (VIA). Within the Safer World group member companies, Aldric actively supports the outstanding team of management professionals in achieving corporate growth objectives while overseeing M&A/Sales activities and technology & manufacturing

transfers between North America and Europe. Aldric established VIA to centralize the environmental, social, and governance activities of the group and family office, actively participating in key operating companies including Fesco Energy as well as strategic investments with a focus on clean energy, carbon reduction, air, and water. Prior to co-founding the Safer World Group, Aldric worked the IT and Financial industries, including roles at TechTarget and Thomson Reuters.

## **WORKSHOP 2 SPEAKERS**



### **Catherine Sheehy – Head of Advisory Solutions, Environment & Furniture, UL Consumer**

Catherine Sheehy is based in the US and has twenty years of project and program management experience. As the Head of Advisory Solutions with UL Environment, she and her team manage a range of projects that contribute to circular economy thinking both related to standards and certifications that UL offers in the marketplace – such as UL 2799 Zero Waste to Landfill – and in support of other sustainability objectives. Services offered include sustainability training, risk assessments, innovative claim research and protocol development, and greener market positioning support. Before joining UL Environment, Catherine was a Manager with Accenture

where she led organization design and change enablement teams. Catherine’s other work experience includes the Human Rights Campaign where she helped update and grow the Corporate Equality Index, a tool that rates organizations on diversity related concerns. Prior to that, Catherine worked at the Investor Responsibility Research Center as director of the Corporate Benchmarking Services, where she was director of a research department that provided social and environmental screening data on companies to institutional investors. Catherine has spoken as a panelist or key speaker on NPR’s Marketplace and conferences on corporate social responsibility, socially responsible investing, and sustainability issues. Catherine was also a key author of the UL 880 Standard for Sustainability for Manufacturing Companies, which addresses key enterprise-level sustainable supply chain issues.



**Bert Hunter – Executive Vice President and Chief Investment Officer, CT Green Bank**

As Chief Investment Officer of the Connecticut Green Bank, Bert leads the finance team’s development of new and innovative financing programs that attract more private capital to scale-up the state’s clean energy investments, including energy efficiency, renewables and alternative fuel vehicles and associated infrastructure. Bert was Vice President of Finance and Chief Financial Officer of Spectrum Capital, Ltd, an investment bank focused on commercial aircraft finance and investment in U.S. electric power generation. He was accountable for all financial control and served as the company’s senior risk officer, overseeing all extensions of credit and investment of the firm’s capital. Prior to Spectrum, Bert was the treasurer of the international leasing company of Chemical Bank, where he managed the funding for a billion-dollar portfolio of aircraft and equipment loans and leases outside the United States. Bert is an alumnus, a former Trustee and former member of the Board of Visitors of Wake Forest University (BS) and received his MBA from the Wharton School at the University of Pennsylvania.



**Brad Fletcher – Vice President & Treasurer, Illinois Finance Authority**

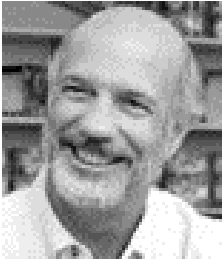
Brad has over a decade of experience managing traditional tax-exempt project financings from application to closing, effectively leading nonprofit, local government, and certain for-profit borrowers and their respective lenders or underwriters to successful conduit bond issuance outcomes. His work encompasses development and implementation of the Illinois Finance Authority’s Commercial Property Assessed Clean Energy (“C-PACE”) conduit financing initiative as an essential agency effort to expand its commercial, industrial, and multi-family portfolio. Additionally, he regularly discusses C-PACE project opportunities and best practices with industry stakeholders and economic development officials of cities, villages, and incorporated towns throughout Illinois. In 2019, Brad directed the drafting of a technical rewrite to the Illinois Property Assessed Clean Energy Act to bring the statute up to standard with comparable Illinois special assessment laws and provide assurance to the market that C-PACE transactions can be capably executed and properly enforced. Since receiving unanimous approval of the legislation in the Illinois General Assembly, the Illinois Finance Authority has issued bonds or notes in the aggregate principal amount of \$57.925 million to fund qualifying C-PACE projects without relying on any appropriation of taxpayer or ratepayer dollars to support the State agency’s mission or operations. Additionally, the Illinois Finance Authority has entered short-term warehouse lending facilities with capital providers to interim finance C-PACE projects in the aggregate principal amount of \$12.300 million.

## WORKSHOP 3 SPEAKERS



**Martin Chilcott – CEO & Founder, Manufacture 2030**

Martin Chilcott is a British entrepreneur specializing in environment and education, best known as the founder and CEO of 2degrees, the world's largest community for sustainable business. Chilcott’s experience in launching and running successful internet businesses in the late 1990s, convinced him that the global community was once more at the brink of systemic change, this time, driven by the need to become sustainable. Having witnessed the power of enterprise and digital technology to drive change, Chilcott was convinced business had to be at the heart of the sustainability revolution, and that web technologies would play a major role in accelerating the process. As a result, 2degrees - an Oxford based technology company specializing in resource efficiency software solutions - was born. Chilcott’s current focus is the company’s Manufacture 2030 platform and its unique cloud-based tool the Bee. M2030 enables large corporations to reduce the carbon emissions in their global manufacturing supply chains by helping suppliers to use resources more sustainably, cutting operational costs and environmental impacts.



**John Cox – Principal, John Cox Consulting**

John Cox is Chairman of the Board of Turkey Hill Dairy, having retired as President and CEO in 2019 after almost 35 years with Turkey Hill and its parent company, Kroger Co. At Turkey Hill, John championed the company’s sustainability initiatives including a multitude of operational improvements and supply chain sustainability efforts. He presently serves as Senior Advisor to Lancaster Clean Water Partners, an organization he helped to found in 2019 to achieve clean water at an accelerated pace in Lancaster County, a priority agricultural geography in the Chesapeake Bay Watershed. He was a board member of the International Ice Cream Association and on the

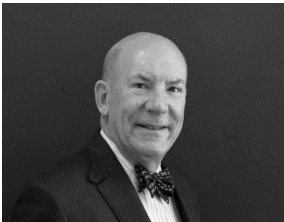
Governor’s Food Safety Council from 2008 – 2011, and also has served on the Boards of the Lancaster County Economic Development Company (past Chair), Lancaster Farmland Trust (past Chair), and Lancaster Workforce Investment Board.



**Sarah Lee – Project Director, Advanced Manufacturing Sector Integration, Washington State Department of Commerce**

Sarah Lee manages a national program that helps small- and medium-sized manufacturers find and secure the resources they need to be more competitive and productive. Before joining the WA State Dept. of Commerce, she worked for the Puget Sound Regional Council, and previously served as press secretary to a U.S. Congressman, director of public affairs at EPA Region 10, deputy executive director of a housing authority, and as senior vice president of an international multimedia firm. She holds a BA in Journalism from Western Washington University and a Master of Public Affairs degree from the

University of Washington, and several executive certificates from Harvard Business School. She goes sailing whenever she has time.



**Frank Altman – CEO, CRF USA**

Frank Altman is founder and CEO of Community Reinvestment Fund, USA (CRF), an innovative national CDFI that is committed to collaborating with others to fill gaps in access to capital and grow the capacity and capability of the industry. Altman pioneered the development of a secondary market for community and economic development loans when he established the organization. Since 1988, CRF has grown from a small Minneapolis firm to a national organization serving community-based lenders across the country. In partnership with a

network of local community partners, CRF has funded \$2.4 billion in loans to job-creating small businesses, community facilities, charter schools and affordable housing projects in 49 states plus Washington, D.C. and in nearly one thousand communities across the United States. Under Altman’s leadership, the organization has an ambitious ten-year goal of delivering more than \$1 billion in additional capital to communities in need and helping create or retain 1 million jobs. Altman earned his Bachelor of Arts degree from Brown University and his Master of Arts degree from the University of Minnesota.

# P2 FINANCE FORUM WORKSHOP SERIES RESOURCES

## RESOURCES AND CASE STUDIES

### GENERAL P2 FINANCING RESOURCES

- Green Banks, such as [Green Bank Network](#) members, work with private-sector investors to create low-cost, long-term financing to maximize the use of public funds.
- [Community Development Financial Institutions](#) (CDFIs) are private institutions that deliver affordable lending. By financing community businesses, CDFIs spark job growth and retention in hard-to-serve markets.
- The [CDFI State Financing Program Directory](#) catalogs over 350 development finance programs offered by states.
- [Sustainable supply chain](#) financing programs reward suppliers that meet certain environmental and/or social criteria by offering them a reduced interest rate on a type of credit known as supply chain finance (SCF). SCF has no restrictions on how suppliers use the proceeds, but the hope is that they are used for sustainability-linked improvements. Some examples include:
  - International Finance Corp. (IFC) provides short-term financing to Levi Strauss & Co. suppliers through web-based financial platforms and financial institutions.
  - PVH (a clothing company) has recently launched an SCF program with HSBC Bank. The PVH VP of Corporate Sustainability says that the program is a motivator for their suppliers to improve social and environmental performance.

### TRADE ASSOCIATION RESOURCE

[Suppliers Partnership for the Environment \(SP\)](#) is an innovative collaboration between automakers and their suppliers. They bring together companies in the automotive value chain, in partnership with US EPA, to advance projects with positive environmental, economic, and community impact.

### STATE PROGRAMS

#### Indiana

- *DERA Funding*: DERA funds grants and rebates that protect human health and improve air quality by reducing harmful emissions from diesel engines. EPA offers funding for projects that reduce diesel emissions from existing engines. DERA funding is available on a federal, tribal, and state level. The Indiana Department of Environmental Management (IDEM) office manages Indiana's allocation. IDEM administers DERA funding through the [DieselWise grant program](#).
- *Indiana Medium- and Heavy-Duty Grant Program*: IDEM allocates a portion of the [VW Environmental Mitigation Trust](#) funds for the replacement or repower of eligible vehicles and equipment, in partnership with schools, municipal and public entities, and the private sector.
- *CIFI Small Business Loan*: CIFI makes [small business loans](#) to new and existing small businesses, providing loans to entrepreneurs who lack access to bank credit. They finance businesses with plans to create or sustain jobs for low- to moderate-income individuals, provide access to crucial goods and services, and foster economic development. A CIFI loan request can range from \$25,000 to \$250,000 and the proceeds can be used for a variety of needs, such as: real estate acquisition, equipment purchases, inventory purchases, improvements, and working capital.
- *Bankable Business Loans*: [Bankable](#) is a non-profit lender based in Anderson, IN that makes reduced rate loans to small businesses for capital equipment purchases and other business needs. Bankable offers three different loan products: Credit Builder Loans, Microloans, and Community Advantage Loans. Loans range from \$500 up to \$250,000.

## Massachusetts

Administered by BDC Capital, and funded by the Massachusetts Department of Environmental Protection, the Massachusetts [Recycling Loan Fund](#) offers loans ranging from \$50,000 to \$500,000 to help Massachusetts businesses active in recycling-related activities obtain the capital needed for any reasonable business purpose. As of 2019, the Massachusetts Recycling Loan Fund had issued 74 loans, totaling over \$16 million, in the past 20 years. The fund has assisted 54 businesses, including anaerobic digestion facilities, a composting facility, a converter of recycled paper, an electronics recycler, a scrap metal recycler, a recycling hauler, and more.

## Michigan

[Michigan Department of Environmental Quality's \(MDEQ\) Small Business P2 Loan](#) Program provides Michigan- based small businesses with low-interest loans to fund eligible P2 projects. Loans are available to any independently owned business with less than 500 employees and can be up to \$400,000 at an interest rate of 5 percent or less and rates of as low as 2 percent were realized by businesses over the past two decades. The program finances projects that reduce or eliminate waste and associated public health hazards, increase energy efficiency, reduce water use, modify equipment or processes, research raw material substitutions, or train employees on how to implement associated P2 improvements. Ineligible expenditures include those with prior incurred costs, refinancing, labor or operating costs, land acquisitions, or any other project that would not reduce or prevent pollution associated with production. Recent P2 projects financed through the program include the transitioning numerous medical facilities from traditional film x-ray systems to computed radiology, constructing a closed loop wash water recycling system for concrete mix-truck washing, and the purchase a downdraft paint booth with an air makeup system for an autobody shop. MDEQ partners with lending institutions by providing half of the financing. Lending institutions can charge a competitive interest rate for their share of the loan, effectively blending the interest rate with the MDEQ's share not to exceed 5 percent. MDEQ's share of the loan is limited to a maximum contribution of \$200,000 from the P2 loan fund. Loans exceeding \$400,000 may be negotiated separately by the lender to finance larger P2 projects. The applicant must also have a satisfactory credit rating and agree to the terms and conditions of the loan established by the participating lender.

## Minnesota

The Minnesota Pollution Control Agency (MPCA) provides [small business environmental improvement loans](#) at zero percent interest to small businesses for capital equipment purchases that help the company meet or exceed environmental regulations, and costs associated with the investigation and cleanup of contaminated sites. Common benefits include a healthier workplace, lower waste disposal bills, and reduced regulatory obligations. Projects that go beyond compliance may result in simpler permits and cost savings. To qualify, a borrower must be an existing small business corporation, sole proprietorship, partnership, or association with less than 100 full-time employees. Loans range from \$1,000 to \$75,000.

## Ohio

- [The Toledo-Lucas County Port Authority](#) has developed a national reputation for innovative business financing, assisting over 600 economic development projects representing a total investment of more than \$2 billion while helping to create and retain nearly 20,000 jobs. The Port Authority has a history of providing a range of loan products to businesses to support productivity and environmental improvements. Under DOE's Better Buildings initiative, the Port expanded its energy efficiency and environmental improvement lending to businesses. Leveraging its experience in managing various financing programs throughout the state, the Port Authority will create the Revolving Loan Fund for eligible businesses throughout Lucas, Ottawa and Wood Counties in Ohio as a gap financing tool for eligible non-profit and for-profit businesses. The Revolving Loan Fund would help to address a regional weakness in access to capital and support the overall goals of the Comprehensive Economic Development Strategy (CEDS) for the region.
- [The Northwest Ohio Bond Fund](#) provides small and medium-sized companies access to the national capital market as if they were A- Investment Grade companies.

- [The Ohio Department of Development Regional 166 Loan Program](#) provides a low interest rate financing for fixed assets purchases such as land, building and equipment for manufacturing, distribution and wholesalers throughout Ohio. A typical transaction consists of 50% bank financing; 40% Ohio 166 loan; and 10% owner equity.
- [The U.S. Small Business Administration 504 Loan](#) provides fixed asset financing to for-profit businesses with a net worth not exceeding \$15 million and net after-tax profit of not more than \$5 million. A typical transaction consists of 50% bank financing; 40% SBA; and only 10% owner equity injection. The SBA 504 takes a second lien position. This program is available to companies throughout Ohio.

### Pennsylvania

The Pennsylvania Department of Environmental Protection's (DEP) [Small Business Pollution Prevention Assistance Account \(PPAA\)](#) provides low-interest loans to small businesses for P2 projects that aim to reduce waste, prevent pollution, businesses comply with environmental regulations, or increase energy efficiency. P2 loans may be used to purchase equipment or implement process changes that reduce or reuse raw materials on site, reduce the production of waste at the source, reduce the use of volatile organic compounds (VOCs) or other chemicals, decrease packaging use, or significantly reduce energy consumption. Examples of P2 projects that qualify for loans include the purchase of digital x-ray equipment, implementing HVAC upgrades, installing chillers or motors, and making process improvements or investing in manufacturing equipment. The interest rate for the loan is fixed at 2 percent for the duration of the term, with a maximum loan term of 10 years. The maximum loan amount is \$100,000. Loans may be used to fund up to 75 percent of the total eligible project cost. Grants or other loans may be used to finance the remaining 25 percent of the project cost.

### *CASE STUDIES*

Below are case studies profiling typical P2 projects that have benefitted from external financing support (e.g., loans or grants), could benefit from such support, or received technical support from a state to make the project more attractive to financial institutions.

#### ***Case Study 1: Alternative Financing Via CDFI and State Voucher Program***

**Industry:** Dry cleaners

**P2 Activity:** Switching out equipment to transition from dry cleaning with hazardous chemicals to wet cleaning

**Project Cost:** \$50,000-\$60,000

**Environmental and Health Benefits:**

- Reduced human exposure to hazardous perchloroethylene (PERC)
- Eliminated the risk of aging machines leaking and contaminating soil and groundwater

**Business Benefits:**

- Improved worker safety
- Costs associated with disposal of used PERC

**Description:** Transitioning from a traditional dry-cleaning process that uses hazardous chemicals to a less toxic process, professional wet cleaning, requires a significant up-front investment. The equipment costs tens of thousands of dollars (typically \$50,000 and \$60,000). To make this change, many dry cleaners must finance the project due to the higher outlays. Traditional financing can be difficult for smaller businesses such as dry cleaners to get. However, they can turn to non-traditional options, such as a CDFI, to help get the financing needed to implement the project. For example, Craft3, a regional nonprofit CDFI in the Pacific Northwest, provides loans designed to help recipients who may not have otherwise been able to access traditional financing. In 2019, Craft3 provided small business loans to two dry cleaners to transition from dry cleaning to professional wet cleaning. This Craft3 loan, coupled with reimbursement funding provided by the Washington State Department of Ecology Equipment Replacement Voucher Program, allowed these businesses the financial means to transition away from this hazardous chemical.

## Case Study 2: Financing from State Loan Program

**Industry:** Medical

**Activity:** Transition from conventional imaging technology and film development (i.e., X-ray) to computed (or direct digital) radiology technology

**Project Cost:** \$32,000

### Environmental and Health Benefits:

- Prevents the generation of approximately 175 gallons of hazardous liquid waste containing silver halides and lead compounds
- Reduces the total amount of solid waste sent for landfill disposal

### Business Benefits:

- Reduced hazardous and solid waste disposal costs

**Description:** A small medical office in Grand Rapids qualified for Michigan's Small Business P2 Loan program and secured a \$32,000 loan at a 2.5 percent interest rate in 2016. Michigan's Small Business P2 Loan Program provides loans of up to \$400,000 at an interest rate of 5 percent or less to independently-owned businesses with 500 or fewer full-time employees. Low interest loans are available to all Michigan businesses including manufacturing, farming, retail, and service. Through the program, the state partnered with a participating lender who provided half of the financing, ensured that the applicant had the cash flow to repay the loan, established the terms and conditions of the loan, and serviced the loan until it was repaid. The state provided the other half of the financing at 0 percent from the state's revolving loan fund. The funding made it possible for the office to make the switch from conventional x-ray to computed radiology.

## Case Study 3: Project Unable to Obtain Financing

**Industry:** Brewery

**P2 Activity:** Modernizing brewing equipment to reduce waste and capture CO<sub>2</sub>

**Project Cost:** \$175,000 for centrifuge and \$60,000 to 100,000 for CO<sub>2</sub> recapture system

### Environmental and Health Benefits:

- Installing centrifuges would reduce material, water, and energy inputs
- Improving canning equipment would reduce waste and wastewater
- Installing CO<sub>2</sub> recapture and generation systems would reduce emissions from fermentation

### Business Benefits Could:

- Increase yields
- Reduce defects
- Reduce material, water, and energy costs

**Description:** While the P2 opportunities could result in significant environmental benefits, the cost savings for this project were not significant enough to offset the finance charges of any loans available. The investments required to implement these P2 improvements were considerable relative to the size of the brewery operations. The size of the company and the age of their business would result in higher-than-average interest rates because they look riskier to banks. In this instance, the breweries were motivated to pursue the P2 opportunities, but they did not make financial sense based on the interest rate, payback period, and the cash flow required for the business to remain profitable. The payback period for the centrifuges was estimated to be 1-2 years but was dependent on the business scaling up production. The CO<sub>2</sub> recapture system would be experimental. CO<sub>2</sub> costs for the brewery were \$32,000 annually. If it functioned properly the payback period could be less than six months, but the investment was deemed too risky as the technology was not proven.



### **Case Study 4: Project Financed and Achieved Return on Investment**

**Industry:** Cabinet manufacturing

**P2 Activity:** Install a solvent distillation system to reduce spent solvents and extend useful life

**Project Cost:** \$40,000

**Environmental and Health Benefit:**

- Extend the useful life of solvents and reduce the generation of hazardous waste (spent solvents)

**Business Benefits Could:**

- Reduce solvent costs
- Reduce hazardous waste management costs

**Description:** In 2018, Canyon Creek Cabinet Company worked with the Washington State Department of Ecology to develop a site-specific return on investment (ROI) spreadsheet to analyze current costs, capital investments, and dollars saved. Ultimately, the company invested approximately \$40,000 for new distillation equipment, reduced acetone waste generation by 90 percent, and achieved a payback period of about 7 months.

### **Case Study 5: Project Financed and Achieved Return on Investment**

**Industry:** Surface coating in aerospace or automotive sectors

**P2 Activity:** Install new technology to reduce paint use and associated waste

**Project Cost:** \$500,000

**Environmental and Health Benefit:**

- Reduce use of solvents for equipment cleaning
- Reduce solid waste

**Business Benefit:**

- Reduced solvent costs
- Reduced paint costs
- Reduced waste management costs

**Description:** A plural component spray system is a substantial initial investment. The system mixes the paint directly at the tip of the spray gun eliminating the need for premixing. Premixing paint normally leads to large volumes of unused paint that ultimately needs managed as waste. One surface coating business in Washington State invested approximately \$500,000 to convert their painting line from conventional sprays systems to a plural component spray system. Estimates showed that the business would realize a return on investment of 1.5 years due to reduced labor, product purchases, and waste generation and disposal costs.

### **Case Study 6: State Program Grants**

[The Massachusetts Toxics Use Reduction Institute](#) (TURI) at UMass Lowell provides grants to industries to reduce their use of toxic chemicals. The grant funding supports equipment upgrades, process modifications, improved operations and maintenance and other means of achieving TUR. Below are four examples of grant supported projects

- [River Street Metal Finishing](#) received a TURI industry grant to purchase a new acid purification system that filters the dissolved aluminum out of the tanks and returns the filtered solution back to the tank. As a result, the reduction of sulfuric acid use is improving worker safety, reducing hazardous waste and saving money. The company expects to save approximately \$1,200 annually in chemical costs due to using less sulfuric acid.

With the reduction of hazardous waste generated, the company expects to save an additional \$3,800 annually.

- [Morgan Advanced Materials](#) of New Bedford, Massachusetts, a manufacturer of ceramic feedthroughs for medical and aerospace industries, eliminated the use of TCE used in a vapor degreaser. The company received a TURI grant to purchase a water-based cleaning system and used TURI lab services to test the effectiveness of various solutions to remove wax from parts. The company moved to a new borax mixture for their cleaning purposes and are realizing an annual savings of approximately \$30,000. Morgan will see a return on their investment in a little over three and a half years.
- [Umicore](#) worked with its vendors and TURI to find a safer parts cleaning process that eliminates its use of perchloroethylene (PCE). Using a new vacuum degreaser system with a safer cleaning chemistry, the company projects a savings of over \$21,500 annually, while protecting worker health and safety and reducing its regulatory obligations.
- [CD Aero](#) of New Bedford, MA worked with TURI and the Massachusetts Office of Technical Assistance (OTA) to find a safer alternative cleaning process to the use of n-propyl bromide (nPB). With a new aqueous cleaning process, the company is now saving \$46,000 per year, protecting health and safety and reducing its regulatory obligations.

### **Case Study 7: State Technical Assistance, Making the Business Case**

- [Washington State Department of Ecology](#) assists small and medium sized businesses in achieving toxic chemical use reduction by providing technical assistance along with economic analysis to help them make the business case for making a capital investment. Below are two examples of how their services can help businesses move towards P2.
  - *Solvent distillation.* In some industries, distilling solvents can present an alternative to directly disposing of hazardous waste. This requires an investment in distillation equipment. In 2018, Canyon Creek Cabinet Company (a cabinet manufacturing business) worked with the Washington State Department of Ecology to develop a site-specific return on investment (ROI) spreadsheet to analyze current costs, capital investments, and dollars saved. Ultimately, the company invested ~\$40,000 for new distillation equipment, reduced acetone waste generation by 90%, and achieved an ROI of 0.6 years.
  - *Plural component spray paint.* Businesses like those in aerospace and automotive industries use spray guns to apply premixed paint for client's specific color requests. Premixing paint normally leads to large volumes of unused paint that ultimately gets disposed of. By switching to a plural component system, which mixes the paint directly at the tip of the spray gun, companies can eliminate overmixing and drastically reduce the use of solvents for equipment cleaning. A plural component spray system is a substantial initial investment; one painting business in Washington State invested ~\$500,000 to convert. Although, estimates showed that this was well worth the investment; an ROI of 1.5 years was achieved due to reduced labor, product purchases, and waste generation and disposal costs.

## P2 FINANCING: DEFINITION OF TERMS

### Customers:

- “A person or an organization that buys goods or services from a shop or business” ([Oxford Dictionary](#))
- “One that purchases a commodity or service; an individual usually having some specified distinctive trait” ([Merriam Webster](#))
- P2 Example: A small business that receives technical assistance may be viewed as a customer receiving a service. A customer may also be a business receiving (borrowing) the loan for a P2 project. ([EPA](#))

### Financial intermediaries:

- An “institutional unit” “channel[ing] funds from lenders to borrowers” ([OECD](#))
- P2 Example: An intermediary can help facilitate the loan process between small businesses or other organizations and financial institutions that are participating in P2 projects. Intermediaries can support the customer by providing guidance that will make their loan application more attractive to lenders.

### Lenders:

- “A business or financial institution that extends credit to companies and individuals with the expectation that the full amount of the loan will be repaid” ([Corporate Financial Institute](#))
- P2 Example: An institution that is funding a P2 technical assistance project to a small business can be considered a lender. The lender defines the terms of the loan. Some examples of P2 lenders include commercial institutions and government programs ([EPA](#)).

### Types of risk/uncertainty in the P2 financing space:

- Definition of risk: “Degree of uncertainty and/or potential financial loss in an investment decision” ([Investor.gov](#))
- For small businesses, there are a variety of risks, including economic, compliance, security and fraud, financial, and operational.<sup>1</sup>
- A P2 project may be a smaller business’s first instance in taking out a larger-sized loan. The business may not have the tools or knowledge to maintain the loan terms or payment timelines ([EPA](#)).
- Lack of “established credit or cash flow history,” which may be risky if they cannot meet the repayment timelines ([OCC](#)). This also means they may not have “assets that can serve as collateral,” and “uncertain revenue prospects” ([EPA](#)).
- Uncertainty in whether the business or organization will commit to a P2 project as a priority when faced with other priorities unique to small businesses ([EPA](#)).
- Lenders contracting with third parties to implement the loan can produce inherent “operational risk” ([OCC](#)).

### Instruments/mechanisms to buy down the cost of capital – insurance, bundling, etc. – and how they work:

- Definition of buy down: “To lower interest rates for a buyer in the early years of the loan” ([Collins Dictionary](#))
- Definition of cost of capital: “Minimum rate of return that a business must earn before generating value” ([Corporate Finance Institute](#)); “The return a company needs to achieve in order to justify the cost of a capital project” ([Investopedia](#))
  - » Cost of capital is one method by which lenders will determine whether to approve the loan
- Insurance: Insurance includes “loan protection insurance,” which covers payments if the borrower is not able to “due to a covered event” ([EPA](#)).
  - » Loan insurance allows the business to be covered in case of an event where they cannot make payments, which ultimately ensures the lender is covered ([National Funding](#))
- Bundling: “Companies sell several products or services together as a single combined unit” ([Investopedia](#))
  - » Allows loans to be bundled together if businesses have taken out multiple loans they need to pay off.

- Debt financing: “Entails selling fixed income products, such as bonds, bills, or notes, to investors to obtain the capital needed to grow and expand its operations” ([Investopedia](#))
  - » Debt financing can help small businesses grow their capital
  - » Equity financing is similar, in which case businesses sell equity for the company to the lender
- Tax incentives: Tax incentives to businesses applying for the loan implies there will be a growth in their business and therefore reduces the lenders’ cost of capital ([EPA](#))

#### Aspects of costs that these instruments address:

- Risk perception: “The subjective decision-making process that an investor uses when evaluating risk and the amount of uncertainty” ([Investor Behavior](#))
  - » Lenders use risk perception to determine whether a business is worth investing in based on their business/financial history.
  - » Lenders may also perceive the actual benefits of the pollution prevention projects
- Risk aversion/affinity:
  - » Risk aversion: “The tendency of an economic agent to strictly prefer certainty to uncertainty” ([Corporate Financial Institute](#)).
  - » Certain institutions may favor businesses/organizations that apply for P2 funding that do not come with any risk
- Efficiency of lending: Applies to commercial banking. Efficiency in banking means the efficiency ratio: “The value of net revenue found by subtracting a bank’s loan loss provision from its operating income” ([The Balance](#))
  - » This indicator for a bank’s ability to process loans efficiently may impact a P2 project’s business that has to cover many costs up front
- Fixed/variable costs of financing compared to returns:
  - » Fixed costs of financing: “A cost that does not change with an increase or decrease in the number of goods or services produced or sold” ([Investopedia](#))
  - » Examples for P2 projects may be the cost of a new piece of equipment.
- Variable costs of financing: “Costs directly associated with production and therefore change depending on business output” ([Investopedia](#))
  - » Examples for P2 projects may be the cost of contractor services, as well as conferences, trade events, maintenance, etc. ([EPA](#))
- Return: “The money made or lost on an investment over some period of time” ([Investopedia](#))
  - » The above instruments allow for lenders to ensure their return rate is what they are expecting. P2 Technical Assistance providers can help businesses to outline what the return on investment for a particular P2 project will be ([EPA](#)).
- Channel marketing: Using “new partners to help transfer goods from producers to consumers” ([Marketing Schools](#)). Businesses will use external, third parties to market their services or goods. This can be applied to either the lender or the borrower. Channel marketing can reduce costs associated with outreach or distribution.

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#### Endnotes

- 1 <https://www.americanexpress.com/en-us/business/trends-and-insights/articles/7-business-risks-every-business-should-plan-for/>