

PACKAGING TECHNOLOGY & RESEARCH

WHO WE ARE
WHAT WE DO
HOW WE DO IT



Dr. Claire Sand thinks “all food packaging all the time”

About our Strategy & Roadmap capabilities



Claire’s mission is to enable a more sustainable food system with science and value chain innovations that more sustainably increases food shelf life and prevents food waste

- 35+ years of food packaging experience
- Ranks innovative packaging science and value chain solutions to extend shelf life
- Generates implementation roadmaps and aligns business cases
- IFT Fellow, Riester-Davis-Brody life-time achievement in food packaging award recipient
- Doctorate in Food Science and Nutrition at University of Minnesota
- MS and BS in Packaging at Michigan State University

Owner



Adjunct Professor



Monthly Columnist



Current Leadership & Editorial Boards



Recent Awards



What We Do

Provide tailored packaging
science & value chain
solutions to the
food & packaging industry





**Future of
Food
Packaging**



**Active
Packaging**



**Intelligent
Packaging**



**Value Chain
Drivers**



**Material
Science**



**Process &
Package
Interactions**



**Migration
Complexities**



**Global
Research
Institutes**



Food Waste



**Consumer
Research on
Sustainability**



**More
Sustainable
Packaging**

**Our solutions are
tailored to client
needs**



Selected Clients



Food Industry



Packaging Industry



Associations



Client Work: More Sustainable Food System



A More Sustainable Food System involves optimizing more sustainable packaging to prevent food waste and is:

RATIONALE

Actually be more sustainable and not reduce product shelf life

DEFENSIBLE

Be communicated to retailer, consumers, and post-consumer handlers in a meaningful manner

ACHIEVABLE

Uses what is viable in 1,3,5 years within defined constraints

LINKED

Aligns with retailer, consumers, and post-consumer handler needs and targets

PTR has the blend of value chain, food and packaging science to achieve a more sustainable food system



More Sustainable Packaging

We help clients achieve more sustainable packaging with packaging solutions that are Rational, Defensible, and Achievable.

CLIENTS: PACKAGING AND FOOD COMPANIES AND ASSOCIATIONS

Increase Shelf Life & Prevent Food Waste

PTR's science-based packaging solutions increase food shelf life and prevent food waste.

CLIENTS: PACKAGING AND FOOD COMPANIES AND ASSOCIATIONS

Food Packaging Innovations

PTR helps businesses identify and enact meaningful packaging innovations that meet business goals.

CLIENTS: PACKAGING AND FOOD COMPANIES AND ASSOCIATIONS

Food Package Optimization & Problem-Solving

We fine-tune food packaging using material science, deep value chain, and cost-savings experience.

CLIENTS: PACKAGING AND FOOD COMPANIES AND ASSOCIATIONS

More Sustainable Packaging

Dr. Claire Sand is a food packaging expert with 35+ years in industry and 18+ cases as an Expert Witness.

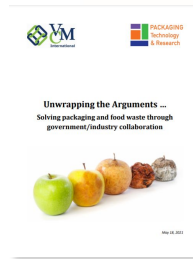
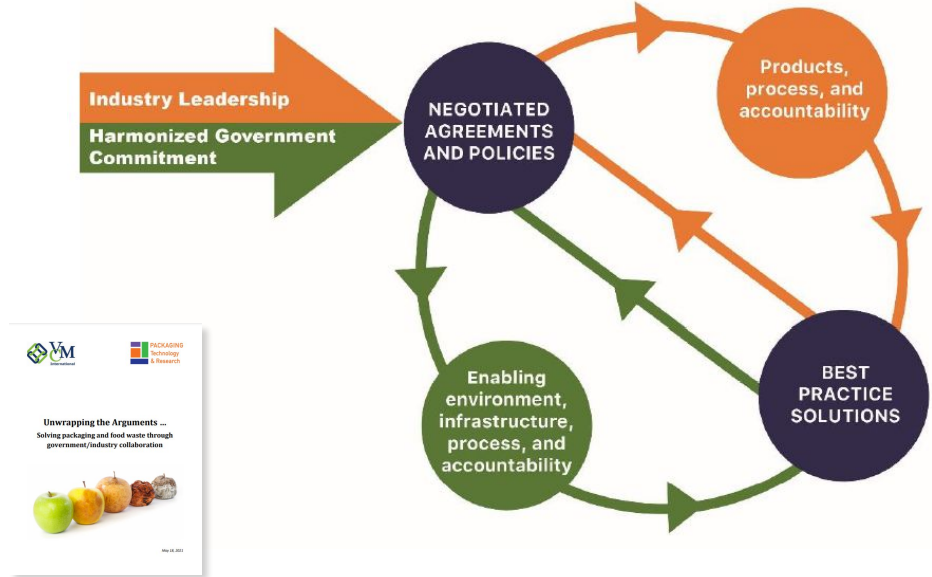
CLIENTS: ATTORNEYS WORKING ON FOOD AND BEVERAGE, PACKAGING & LABELING OR PATENT & INTELLECTUAL PROPERTY LITIGATION AND LAWSUITS

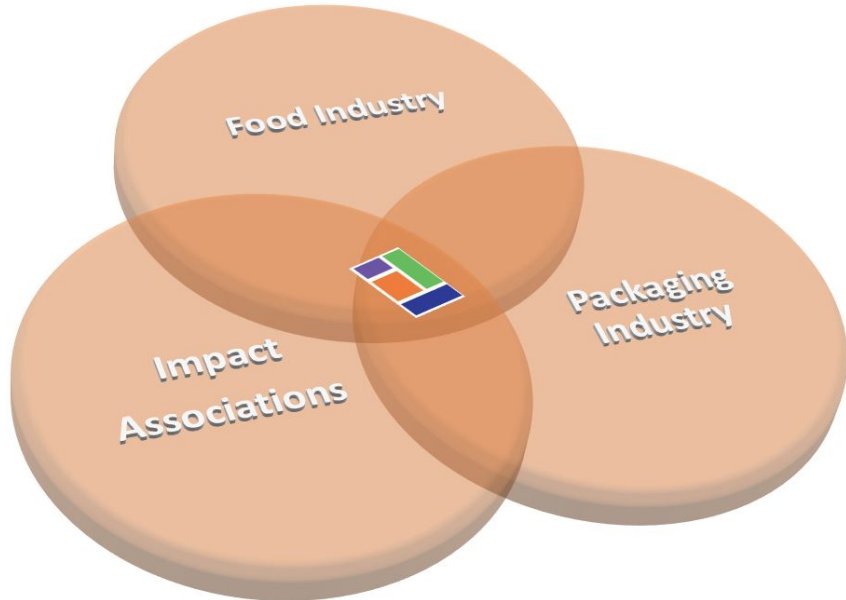
Learn more at www.PackagingTechnologyandResearch.com

THOUGHT LEADERSHIP Addressing Packaging Bans

- Hammer policies **villainize** plastics
- Government hammer policies will increase GHG emissions
- **Effective packaging** and resultant less FLW would lead to a:
 - 10 % reduction in FLW
 - 50 % reduction in landfilled FLW
- **Viable solutions to reduce both GHG and FLW**

Industry leads with support from sound government policies & regulations





Companies we have worked with come in all shapes and sizes!

From startups to high volume global companies



Global Food Company


SITUATION

A strategic assessment and near-term roadmap to outline where the packaging is now and where it should be in the future

SOLUTION

- **Value Chain and Science-based appraisal** of packaging
- Developed a **SWOT assessment** of the packaging, including materials and packaging machinery, and their relationship to customers and consumers
- Defined and ranked Innovation and **ROI** at the product and brand level
- Developed 1,3,5,10-year RoadMap enabling **guided leadership decision-making** on key packaging technologies

RESULTS

- 
- ✓ **Packaging SWOT**
 - ✓ **1,3,5,10-year Packaging Roadmap**
 - ✓ **ROI for identified package technology investment**



2 Major Packaging Suppliers

SITUATION

Large packaging suppliers were starving for new growth in primary food packaging

SOLUTION

- PTR **pinpointed OTR, WVTR & mechanical** packaging requirements in 31 categories with 25,000+ products
- PTR focused on existing and new packaging solutions to:
 - **Combat food deterioration** mechanisms
 - Met **value chain needs**
 - Align with **emerging food processing** technology

RESULTS

- ✓ **R&D dollars** were prioritized within an innovation pipeline identifying short, to long term initiatives, level of complexity and the dollar value
- ✓ Replaced PET for the chilled food market
- ✓ **Innovation continues**



Frozen Food Company

SITUATION

Pillars but not clear view on how to achieve them

SOLUTION

- **Identified technologies** needed to achieve 4 defined pillars
- Isolated and **selected common technologies** to meet the needs of different brands
- Defined technologies as **scalable-, pilot-, R&D-stage** to meet varied and specific brand needs
- Mapped out **resource commitment** needed to capture technology and weighed against market size and brand dynamics

RESULTS

- ✓ Innovation pipeline to direct package development
- ✓ Developing 2 core technologies in active packaging
- ✓ IP
- ✓ Value chain meaning





European chemical company

SITUATION

Client had existing antimicrobial technology and needed to assess viability for packaging

SOLUTION

- PTR performed determined **science-based value proposition** in markets of interest
- PTR **developed and applied rubric** to assess competitors, pricing, and capital, brand and packaging company propensity for innovation

RESULTS

- ✓ **Market sizing at the brand and packaging film level for this technology**
- ✓ **3 Specific brands to target**
- ✓ **2 packaging partners to target**
- ✓ **Means and Value Chain drivers to aid implementation**



Food company

SITUATION

RTE brand at QSRs faced major food safety concerns

SOLUTION

- Identified optimal solution to address a **food safety concern & restore brand confidence**
- Ranked specific intelligent packaging - to be calibrated to accurately **match listeria growth kinetics** - solutions for a specific product
- **Prototyped** 3-5 best viable options to meet defined success factors
- Managed development **relationship** between supplier and brand
- **Built business case** to garner higher price for intelligent packaging

RESULTS

- ✓ **Competitive advantage with intelligent packaging to lower labor costs**
- ✓ **Eliminated food safety as a concern unlike competitors** Connected with **reduced food waste platforms on UNSDGs**
- ✓ **Expanded sales 15% due to less waste**





Global food company

SITUATION

Establish bakery client needed to retain brand image and appeal to a specific newly identified consumer needs

SOLUTION

- PTR **developed rubrics** based on internal knowledge interviews
- PTR developed 25 **package concepts** based on rubrics
- PTR refined 10 concepts with team input
- PTR developed and delivered survey that **pinpointed** 3 lead concepts

RESULTS

- **Depth of understanding on use of rubric to guide the package design process**
- **3 concepts with rationale to advance to consumer testing**





Material Science



Value Chain Drivers



Future of Food Packaging

Global food companies with \$2 billion in annual sales

SITUATION

Leadership gaps at VP and Director level needed to be filled to meet Innovation timelines

SOLUTION

- Augmenting the team, PTR supported **innovation** driving 12 projects with 10-18 month **implementation** plans
- Provided support for FAT, rogue damage analysis, competitive assessments, implementation of active and intelligent packaging, working with suppliers to achieve more PCR
- PTR initiated and managed a **streamlined** package development process
- **Transferred knowledge** to new hire

RESULTS



Packaging R&D support allowed for 3 successful launches



Streamlined package development process to speed time to market and manage risk



Rapid decision-making with upgraded knowledge



Global food company

SITUATION

Factory Acceptance Test (FAT) on new machine was underway and was limiting client to 5 film options

SOLUTION

- **Optimal materials selection** - PTR specified 5 from 25 film options
- PTR worked with existing supplier **to develop optimal films** for store-drop-off recyclable compatibility

RESULTS

- ✓ **Smooth path forward for SAT**
- ✓ **Assurance that cost reduced film options remain viable**
- ✓ **Optimization**





How can I help you?

Free

By Project

My Website

Stay current with the hottest food science and food packaging trends & insights



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My Network

Let's Connect!



My Presentations

Check out my presentations on SlideShare



Everything Else

Stay current with the hottest food science and food packaging trends & insights





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Owner



Adjunct Professor



Monthly Columnist

