

# Gumption And The Folk What Got It: A Digest 17th birthday essay

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I have good news to share today, from Ensyn; also, from a company called Matereal that's been bubbling below the surface for some time and is now emerged from stealth. Finally, from a worthy group called Change Chemistry that is co-organizing a meeting of interest this week with DOE leaders.

I suppose that, in our energy & transport story, Elon Muck and team Tesla take the prize for rags-to-riches story, and team Aramco takes the prize for scale-to-the-heavens story, but I think Ensyn deserves the prize for most unjustly unheralded yet inspiring story. It's a marvelous company with an track record of success, I've long admired them.

News arrived late last week of a \$9M investment by Nexus in Castlerock Biofuels LLC, Ensyn's joint venture for the development of production capacity in the U.S. The USD\$9 million will be deployed primarily for the development of a 20 million gallon/year production facility in the Katahdin region of Maine, at the north tip of the Appalachian trail. The project will produce RFO renewable fuel oil from forest residuals for sale primarily to local institutional and industrial entities for sustainable, low-carbon heating purposes. The newly installed production capacity will also be used to commercialize other products, including renewable gasoline & diesel, green hydrogen, cellulosic ethanol & methanol, SAF, renewable chemicals and carbon sequestration.

Meanwhile, Matereal closed it's \$4.5 million seed funding round, led by the Collaborative Fund. The technology powering Matereal's transformative agenda is the commercialization of its groundbreaking chemical platform, Polaris. This innovative non-isocyanate polyurethane (NIPU) is a monumental breakthrough, offering a sustainable and safe alternative to traditional polyurethane—a historically challenging plastic to decarbonize. With the global polyurethane market reaching nearly \$90 billion annually, the need to address its carbon-intensive and toxic nature is paramount, and Matereal is on a path to replace it with an alternative that is the real DAC of this age of energy and materials transformation. Not the flimsy economics of Direct Air Capture, this is Durable, Adaptable, Cost-effective, just as everyone should ask for. Focused initially on coatings in textiles, the Matereal offers a nearly million-fold reduction in toxicity compared to conventional alternatives, and the potential to avert the release of gigatons of CO<sub>2</sub> at the scale that it could one day reach. Huzzah.

From Washington DC comes the in-person meet-up opportunity I earlier tipped. It's the **Scaling Sustainable Chemistry for Industry Transformation meeting**, at Westin City Center Washington DC, this Thursday, August 1st. [Register here for the event.](#)

The U.S. Department of Energy's Industrial Efficiency and Decarbonization Office and Change Chemistry are the hosts. The goal: to discuss the research, investment, and collaborations needed for scaling sustainable chemistry solutions and specifically

1. **how the federal government can work to advance a chemicals sector** that provides critical chemistries at scale, while achieving decarbonization, chemical pollution and safer chemistry, and environmental justice goals
2. **how to leverage coordinated public-private actions** to scale sustainable chemistry needs while achieving decarbonization, safety and environmental justices goals

All of these organizations are not as well-known as they should be, but as the Book of Matthew reminds me, *So the last shall be first.*

## About them Underdogs

The other day I was looking down and across the south end of Central Park in New York City while waiting for a coffee to arrive, and there, filled to business if not busting, were the pickleball courts that replace the Wollman Ice Rink during the summer months.

In the annals of American sport, I can't think of a game that was more unheralded for more years than pickleball. For roughly the first fifteen years or so, I am not sure if more than twenty families played it.

It's named for pickle boats, those are the ones on the water with the least-heralded crew, the leftovers, the holdovers, named as I dimly recall from the days of the fishing fleets when the last boat back to port was the 'pickle boat' which I think had something to do with taking too long to pickle their fish in some brine.

When I was a boy, I thought the game was named not for the underdogs but an actual dog, Pickles, who used to run around and occasionally steal the dang ball, and I thought it was 'Pickle's ball'. My father straightened me out, the game was named for the boat, and intimately the dog.

It wasn't much, the boat. I am not even sure if it had a name, I don't remember whether it was the humble ship Pickle or it was just the humble dang pickle-boat. The underdog boat, the underdog players, the underdog game — life surprises you some times.

## The wellsprings of belief

One of the reasons that Ensyn made me a believer, guys like Robert Graham, Ian Barnett, Robert Pirraglia, who just don't know how to give up on a good idea. Same goes for Phil Pienkos and Jacqueline Ros Amable at Matereal. And for Joel Ticknor at Change Chemistry. I am reminded what Margaret Mitchell once said, when asked about *Gone with the Wind*:

*"What makes some people come through catastrophes and others, apparently just as able, strong, and brave, go under? It happens in every upheaval. Some people survive; others don't. What qualities are in those who fight their way through triumphantly that are lacking in those that go under? I only know that survivors used to call that quality 'gumption.' So I wrote about people who had gumption and people who didn't."*

Gumption, that's the story of the bioeconomy too, amidst valleys of death, the valleys of dearth, the perils of scale, the heartlessness of markets, the teeter-totter of policy. What will be remembered, in the end, is the perseverance of the pioneers of the trail.

People tell you it must be sustainable or you cannot succeed. When you make it sustainable, they tell you, it is not enough, it must be world-scale. When you scale it, they tell you, it's not enough, it has to be

affordable. When you make it affordable, they tell you, it's not enough, it must be cheaper than the cheapest oil that any can lift out of the ground while paying nothing for the consequences.

Some persevere, and find a way. It's inspiring, it's gumption. Today marks the 17th birthday of The Digest and I can tell you from the heart, what makes it worthwhile to cover this story through more ups and downs than you can find in the Rocky Mountains, is the pioneer spirit, alive and well, the Conestoga wagons are long gone, but the footprints are still showing on the trail.

## The improbable shaping of the landscape

Before there was pickleball in Central Park, there was Wollman Rink all year long, before the Rink was The Pond, before The Pond was DeVoor's Mill Stream that ran from what is now Central Park to Turtle Cove, before the mill on the stream there was the old Dutchman, David DeVoor, and his Manhattan farm, before the farm these were hunting grounds for the Manhattan, before that, it was a glacier field. You can still see the stripes on the stone in Central Park from the glaciers grinding over the Manhattan bedrock.

*"To every thing there is a season, a time to every purpose under Heaven"* as one reads in Ecclesiastes. For the bioeconomy, good news, the time has come, it does not come easy, it does not come quick, like the grinding glacial advance at a few feet per day, yet they shaped the landscape, that ice, slow as it was, it's time had come, and it was unstoppable, though you'd think, looking around today, that ice is so ephemeral it can grind nothing, advance nowhere, it's just another undervalued underdog. Here's to the underdogs, they surprise me, and in a most delightful way.

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