

FILE UNDER:

**CleanTech
Innovation**



**We aim to
replace the PVC
with plants in
records, serving
as a global model**

INTRODUCING THE WORLD'S FIRST ECO-FRIENDLY, GEOTHERMAL ENERGY- POWERED RECORD FACTORY

LARRY JAFFEE • THERMAL BEET PRESSING DECK • APRIL 2024

START-UP STRATEGY

Phase One: Proof of Concept

—get Iceland factory operational 3Q 2025

Phase Two: Launch Thermal Beets record label

**Phase Three: Export to U.S. process/local
supply chain concept**

Co-Founded B2B conference 'Making Vinyl' in 2017 in Detroit

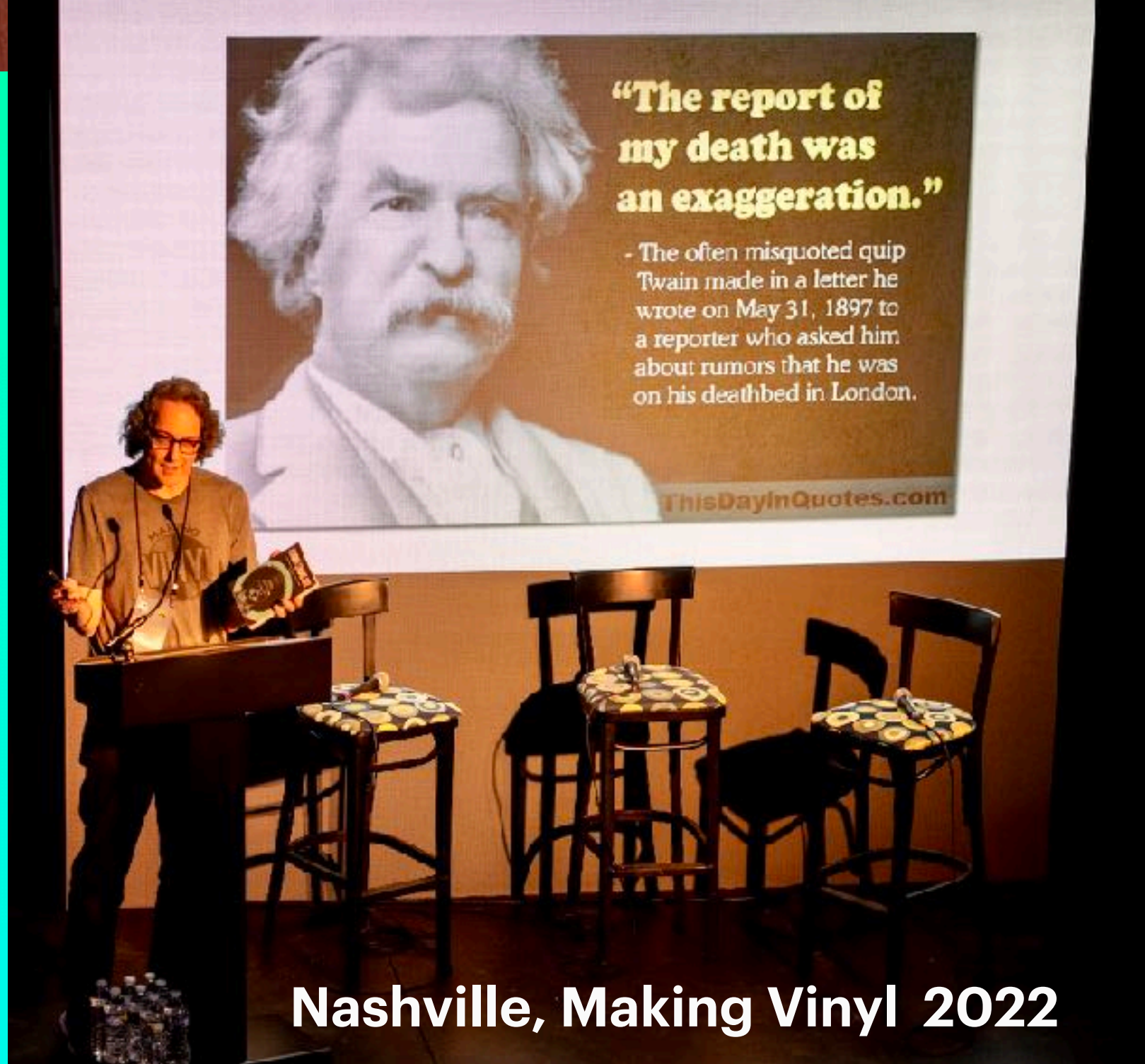
Vinyl revival: is there an environmental cost to record sales?



Vinyl sales have a 3.6% share of the overall recorded music market, including streaming. Photograph: Many records - selling at their highest rate for decades - are PVC, which is to be banned in the EU

For an event dedicated to the vinyl revival, the setting couldn't be more appropriate. In the mid-70s David Bowie sat in the same wood panelled room

May 2019, Berlin event, Guardian headline



Nashville, Making Vinyl 2022

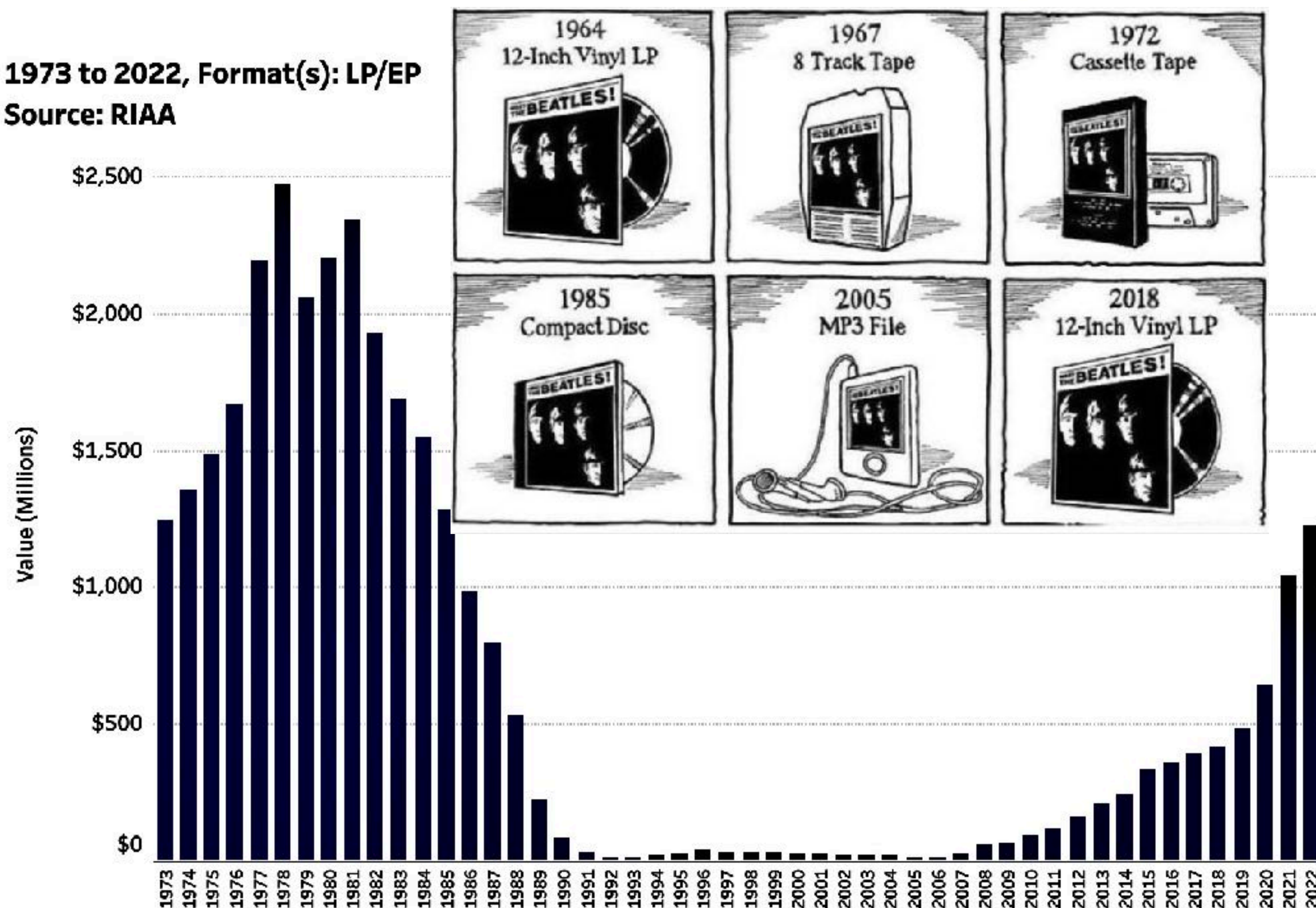
After returning from Making Vinyl in Holland in October 2023, three founding partners decided to build a sustainable, carbon-free record factory in Iceland. We visited in mid-March. The government embraced the concept and offered incentives.

The record revival is about to get modernized and far more ecological



U.S. Recorded Music Revenues by Format

1973 to 2022, Format(s): LP/EP
Source: RIAA

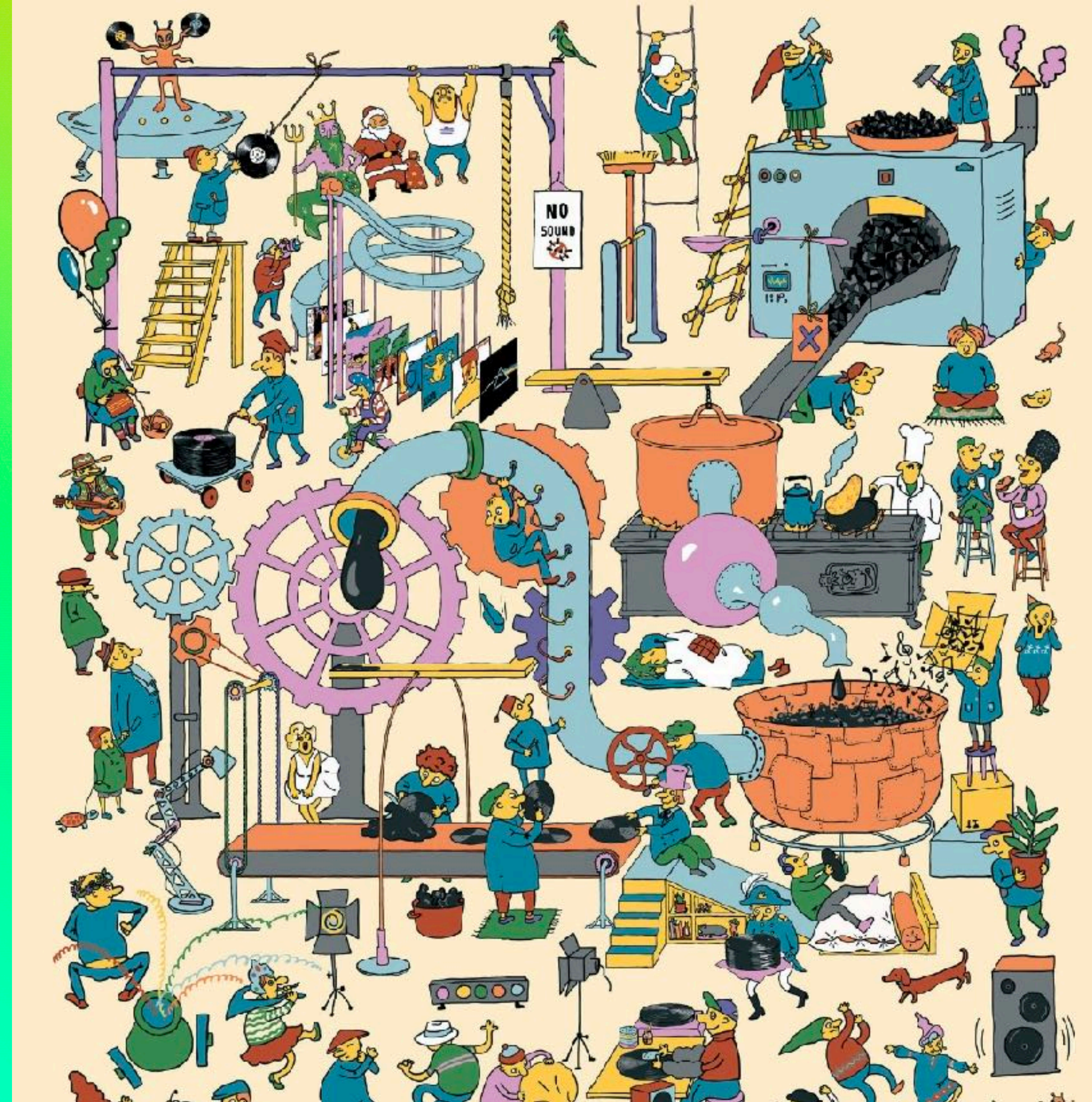


Today's vinyl buyers hit all demographics and future growth is projected through 2030.

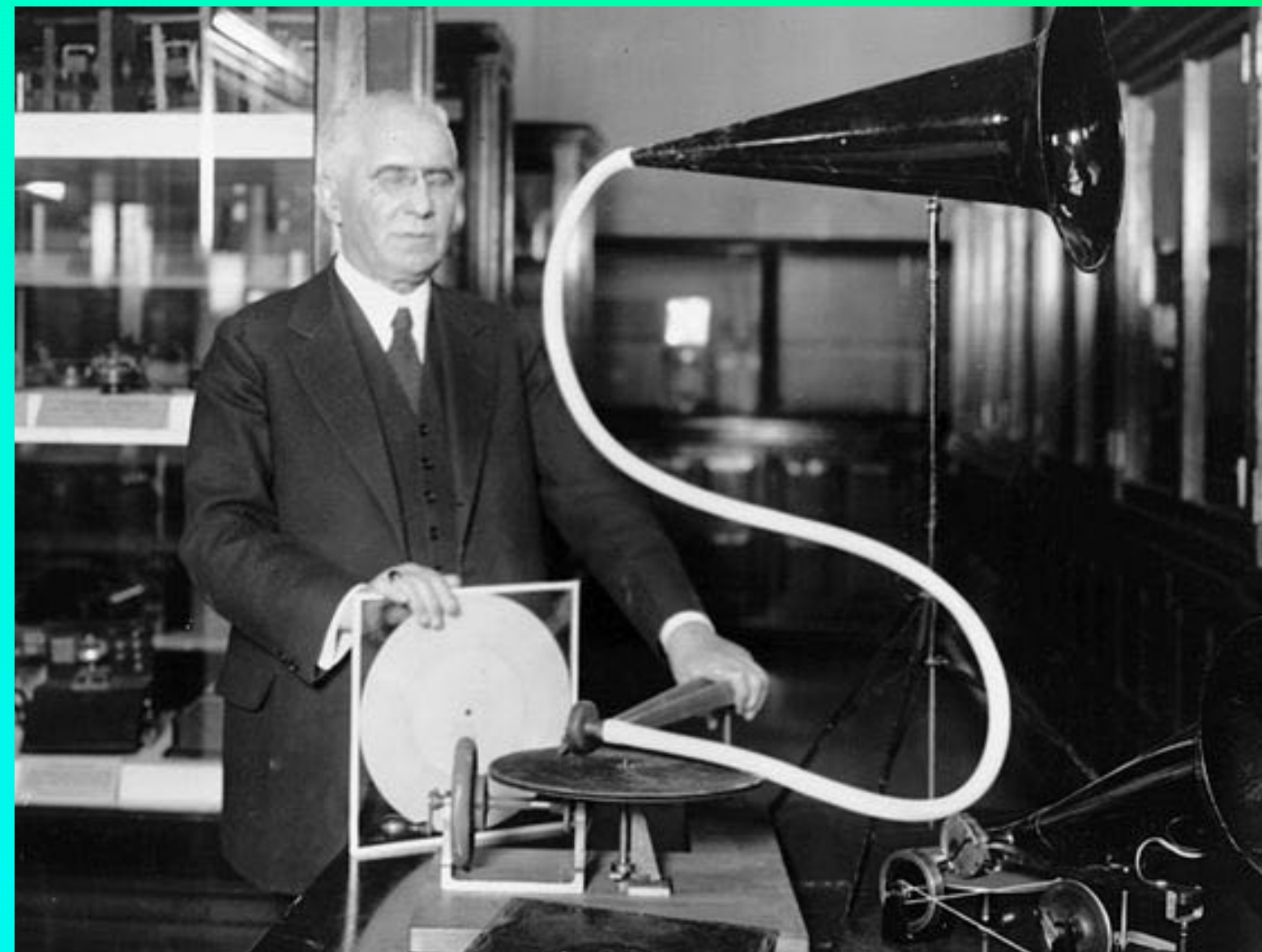
Records Make People Happy But How They're Manufactured is Outdated, and Not Eco-Friendly



The process of pressing vinyl records hasn't changed much since the LP debuted in 1948.



1960s TV cartoon 'The Flintstones' Stone-Age record player (above), while inventor Emile Berliner shows off his round disk prototype turntable in 1888.



We're Removing the Fossil Fuel from Records

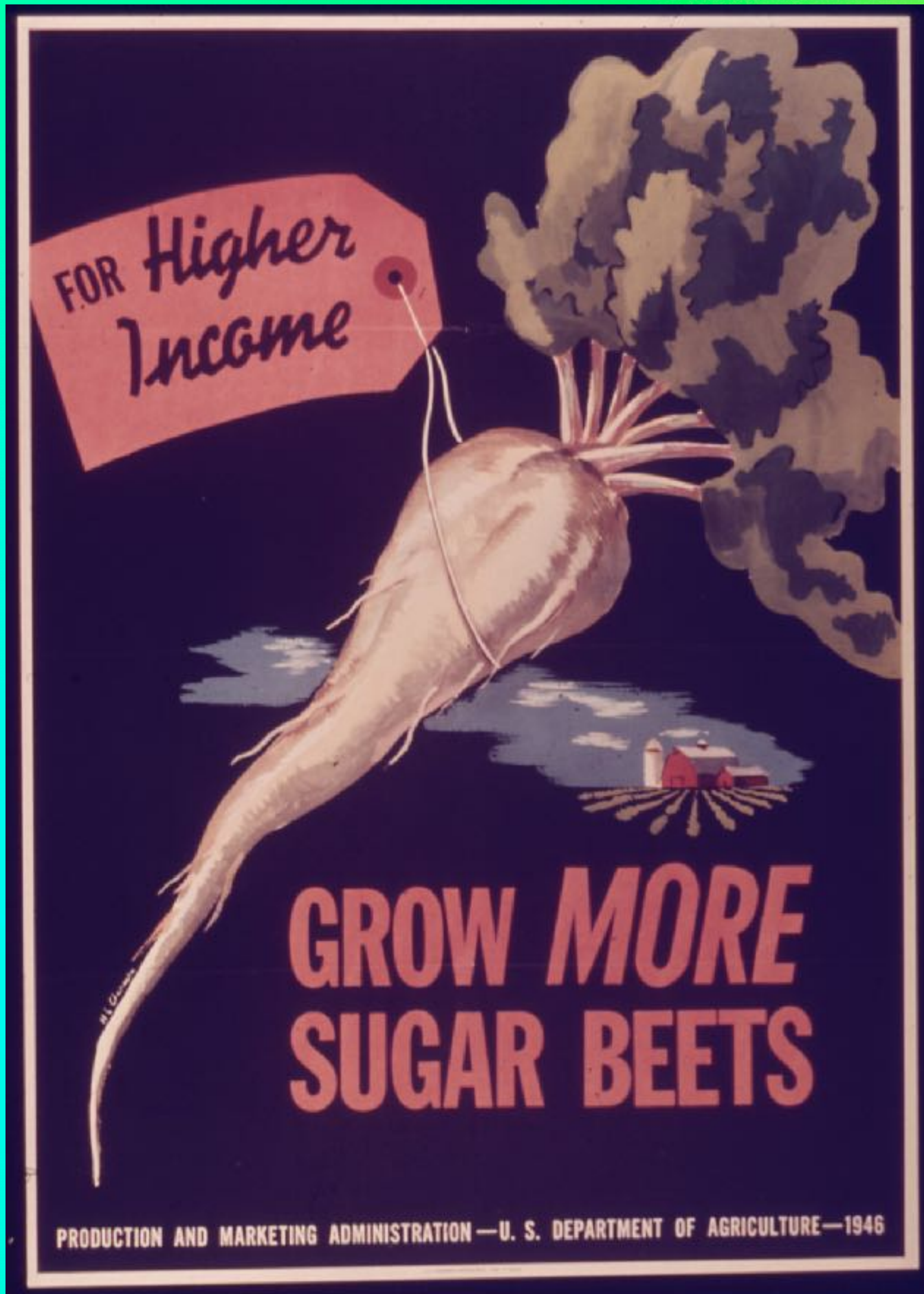
Vinyl LPs are made from PVC. Greenpeace calls it the "most environmentally damaging plastic." PVC records require toxic stabilizers. Our additives are biodegradable.



will pioneer a more fully sustainable way to produce records locally for Iceland's unique and vibrant music market. Our strategy localizes the supply chain on the island and eliminates material imports wherever possible.



We Plan to Make Our Records Out of Sugar Beets



Our alternative to PVC is made from plant-based materials, with some natural mineral binders, and non-toxic additives.

Tested in the UK, this “Bio-plastic” was developed by Evolution Music pressed on LPs for Brian Eno’s Earth/Percent featuring music of Michael Stipe (REM), Nile Rodgers (Chic), Robert Smith (The Cure) and Coldplay.

We’re exploring the use of Hemp—legal in Iceland—for our record packaging.

More info: <https://www.bloomberg.com/news/videos/2021-01-10/iceland-s-hemp-revolution-video>



WHY ICELAND TO LAUNCH OUR ECO-APPROACH?

Far less energy costs, unique music scene

Takes advantage of Iceland's geothermal energy

Uses less electricity to run a steamless pressing machine

Removes the need for a fossil fuel-fed boiler

Embraces solar and hydro power to help run the factory

Uses recycled paper, plant-based inks for packaging



Iceland July 2023 volcanic eruption near Grindavik



Government-Owned Agency Invited Our Thermal Beets Factory to Be Its First Cultural/Arts Tenant and Grow the Sugar Beets in a Greenhouse



Iceland **M**usic

“I am convinced the Thermal Beets project has great potential.”
—Sigtryggur Baldursson,
Export Manager, Iceland Music

In March, We Found Icelandic Partners to Help

This Model Factory...

That Can Be Replicated

Elsewhere in the World

- Similarly-minded organizations, people who want to save the planet
- Music labels (Earth Sonic); musicians; record stores; recording studios; Iceland University of the Arts
- **Next**: recycled paper producers; eco-farmers with greenhouses
- **Activists and influencers**
- **Eco-savvy investors who love music and seek a ground-floor opportunity on the future**



How Do Sugar Beet LPs Sound?

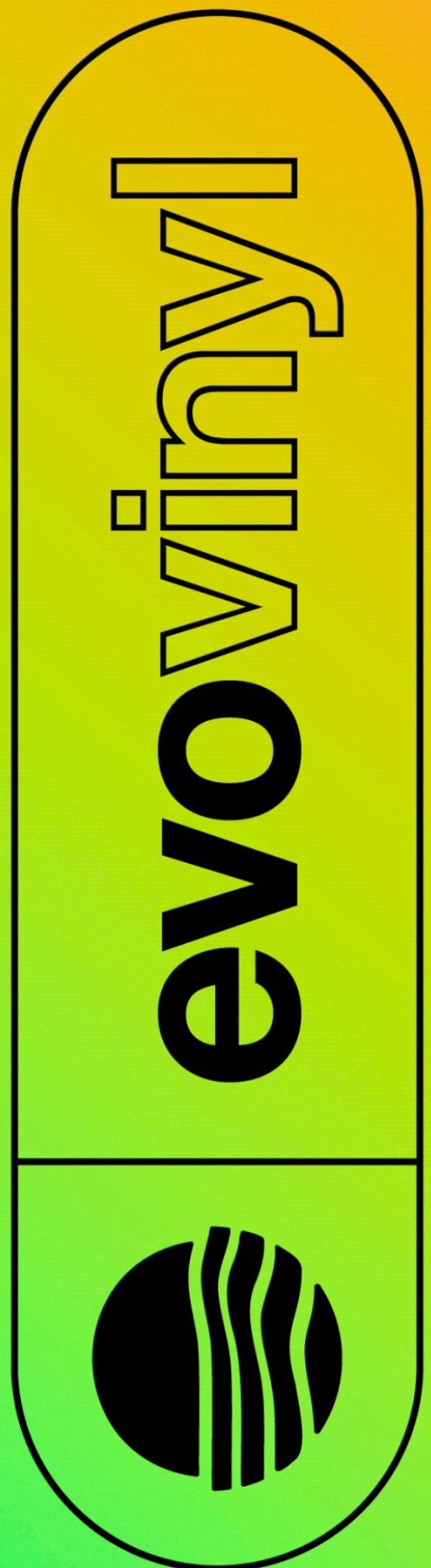
Abbey Road Studios in-house producer Rob Cass was **"SPEECHLESS"** after learning Evolution's test record was made entirely from plants.

Peter Thomas, founder and chairman of the UK-based pro audio manufacturer PMC, reported the record's aural performance was **"INDISTINGUISHABLE"** from traditional vinyl.

PMC recently invested in Evolution, which spent 5 years developing its Evovinyl material.



1980s Maxell cassette tape advertisement



Gen Z Willing to Pay More for a Sustainable Record



- 18-24 year olds listen at least once a week to vinyl, CD and cassettes at a higher rate (59%)
- 25-34, 35-44, 45-54 & 55-65 (all between 40-45%)

—April 2024 survey by UK vinyl packaging firm Key Production

Thermal Beets Records Use Less Energy to Manufacture, Production is far more efficient



Vintage press at Rainbo Records, Santa Monica, California

- Plant-based material consumes 30% less energy if a factory switches entirely to this product
- Requires less heat than PVC, melts more quickly
- Cycle times 50% lower to press a record with Evovinyl compared with PVC



Making our operation even more sustainable, Thermal Beets Pressing plans to place Solar Panels on the EcoBizPark building roof, such as what they do in Haarlem, Netherlands, at my friends Record Industry

A Team Who's Built Factories & Manufactured Eco-Records



Guðmundur Þörn Ísfeld (President/COO): Iceland Native/CEO & Co-Founder of RPM Records, Copenhagen, Denmark. Since March 2018, RPM has furnished 50% of Iceland's records; Gummi's Danish factory takes responsibility for lowering pollution rates while working with sustainable technology.



Kevin Da Costa (CTO): Vinyl Manufacturing Consultant, Chief Technology Officer of Evolution Music, developer of Evo-Plastic the world's first 100% plant-based alternative to PVC. Previously installed for VinylTech, press supplier. Kevin has built 24 pressing plants in UK, Europe & US. He's on a personal mission to drive sustainable practices across all parts of the vinyl manufacturing and distribution supply chain; he is also building a similar factory in Brighton, UK.



Larry Jaffee (CEO): Co-Founder & Conference Director of Making Vinyl, B2B conference (est. 2017), celebrating the rebirth of global record manufacturing. Thought leader on vinyl's resurgence, author of the 2022 book Record Store Day: The Most Improbable Comeback of the 21st Century; college professor and prolific journalist; Larry's passionate about a sustainable future.

Soundtrack Album for Documentary about Climate Change Activist Greta Thunberg, LP Made By RPM



Soundtrack record manufactured in 2021 at RPM Records in Denmark. Every step in the production process was carefully considered in order to achieve the most environmentally friendly product possible. The records were made of 100% recycled PVC, and the covers printed on wood-free 350 grams per square meter (gsm) 100% recycled uncoated card stock using plant-based inks. The records are protected by a 100% recycled 250 gsm paper inner sleeve and the cover is sealed with a sticker printed on recycled material. No plastic or shrinkwrap will be used in the packaging or production apart from the recycled PVC in the vinyl record itself.

So, Is It Possible to Have



VINYL

...WITHOUT
THE VINYL?

**Slight clarification to the [video](#): vinyl records are recyclable and most pressing plants regrind their scrap PVC material.*

Please Stay in Touch

We Want to Work With You



[Business Plan available in May 2024]

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THANK YOU!