

# NYMARA

IMPACT THAT FLOWS.

## OUR VISION

Nymara transforms stormwater management with ultra-low-cost, high-capacity roads — unlocking climate-resilient infrastructure for cities without disruption or delay.

## PROBLEM

The threat is growing fast. Between 1985 and 2015, the area of urban land within floodplains grew by an average of 2.5% per year, while the number of people living in flood-prone urban areas surged by 122 million. With over 1.3 million high-risk properties and nearly 60% of urban flood damages occurring outside designated zones, more and more regions are expanding into the path of rising waters.

## SOLUTION

Nymara is building hyper-porous roads enhanced with advanced nano-engineered coatings that let rainwater rapidly infiltrate through the pavement, naturally filtering and channeling it into existing drainage systems while repelling debris. Our AI-driven platform pinpoints the most flood-prone and high-impact road segments for targeted deployment, ensuring cities can efficiently upgrade their infrastructure to prevent urban flooding and build climate resilience.

## HOW IT WORKS

Nymara turns roads into giant temporary sponges. Water flows through the surface, which blocks debris but lets rain pass. Beneath, smart layers filter and guide it into the city pipes. AI models pick the best roads to upgrade based on flood risk and road conditions.



Permeable  
Concrete Material



Nanocoating,  
Nanotechnology



AI Flood  
Prediction Model

From our client's perspective, our solution is implemented in 3 steps:

### STEP 1

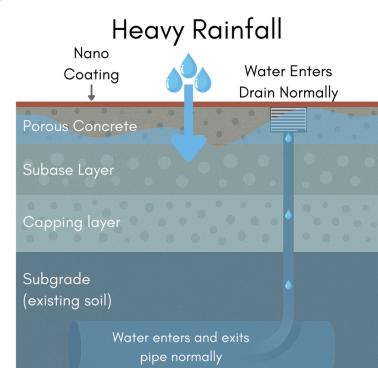
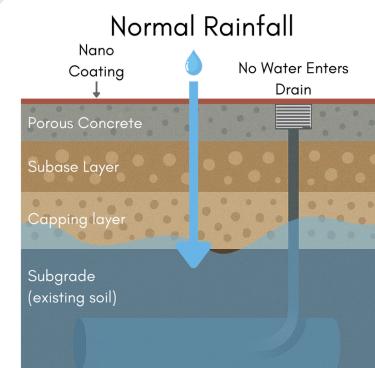
Based on AI flood prediction, identify the roads of focus and begin replacement.

### STEP 2

A SiO<sub>2</sub>-based nanocoating is applied to the top layer of the road surface.

### STEP 3

Cities can maintain it using standard road-sweeping infrastructure — vastly reducing maintenance costs and labor.



## 10X IMPACT

### People

Urban populations are rising, projected to hit 6.52 billion in the next 20 years, pushing about 800 million people into flood-prone regions where sea levels will rise, drastically increasing their vulnerability to coastal flooding and storm surges.

### Resources

In the past decade, the economic damage from floods amounted to **\$453 billion** and are only continuing to increase. Globally, flood events cause an average of **\$64.1 billion** in economic damage, and Nymara can reduce and eventually eliminate these drastic costs.

### Sustainability

The permeable pavement and nano coating acts as a first-flush pretreatment, retaining **60%-100%** of total suspended solids (TSS) and substantially reducing heavy metals before water reaches sewers or waterways. This means we can make public water cleaner overall.



LEARN MORE AT [NYMARA.VERCEL.APP](https://nymara.vercel.app)