# The Power of Synthetically Generated Images

Using traditional image recognition poses many challenges - from inaccurate data that leads to poor decision-making, significant cost and time required to collect and annotate data for algorithm training, and the extensive investment needed that limits scalability and deployment in more use cases or markets.

**Neurolabs has transformed this process.**

Our technology simplifies these complexities by employing digital twins of products and training our algorithms in virtual environments. This method eradicates the need for real data and manual annotations, and it integrates seamlessly with your existing systems, regardless of the platform.

With our image recognition technology, costly investments and lengthy onboarding processes are concerns of the past.

**1**
Data Collection
Manufacturing artwork / printing label is submitted for the SKUs.



**2**
Digital Twin
Using the artwork, a 3D digital twin is generated for each SKU.



**3**
Synthetic Data
Image recognition technology is trained using the 3D asset in virtual environments.



**4**
Trained Algorithm
IR technology can then recognise every SKU in real environments.

# The Power of Synthetically Generated Images

Teams can onboard new products digitally with SKU artwork or capture them in the field using our mobile app. With the Artwork Approach and ZIA Capture App, Neurolabs offers flexible solutions tailored to CPG brands' needs.



*Synthetically generated images*

**Digital twins** enable faster onboarding by accurately capturing 3D representations of SKUs (including soft and complex objects)

## Artwork Approach

ZIA simplifies catalogue onboarding by converting existing PDF and PNG files of product artwork into accurate digital twins—no manual data entry or annotations needed.

This method enables CPG brands to streamline product onboarding, significantly increasing speed of execution and access to insights.

## ZIA Capture App

Brands can also capture real-time product images directly from the shelf with our intuitive mobile app that enables users to onboard new products in less than 30 seconds per SKU.

This process enables swift catalogue updates, ensuring that brands stay agile and responsive to market dynamics and consumer demands.

**Minimum Device Specifications for ZIA Capture App**
Our mobile app is currently compatible with iPhone models 11-16 Pro. LIDAR capability is required to accurately capture product dimensions.