Comprehensive Retail Intelligence: Maximizing Efficiency and Security

Lenovo + NVIDIA + Centific

Bob Degler
Sr. Manager, Lenovo Business Development
Bob.Degler@tdsynnex.com
919-244-5081

Tony Iovino
Director of Business Development, Centific
Anthony.Iovino@centific.com

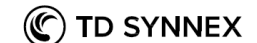# Driving Operational Efficiency in Retail

Features

- Fundamental AI Models
- Accelerated CV and AI Contextualization
- Unified Platform
- GenAI-Ready
- Process Automation

Results

- Protecting remote outdoor areas
- Improving workplace safety
- Damage prevention
- Parking lot monitoring
- Prevents SCO shrinkage
- Sales and logistics management

Pitaya serves a variety of retail segments

Powered by:

Lenovo.　NVIDIA　TD SYNNEX　centific

- Grocery Stores
- Big Box Retailers
- Convenience Stores
- Home Improvement
- Quick Service Restaurants
- Pharmacies
- Warehouses and DCs

Agenda

→ Who we are

→ Frontier AI Data Foundry

→ Pitaya

→ Demos

Introducing Centific

We are a frontier AI data foundry company that curates diverse, high-quality data, using our purpose-built technology platforms to empower our clients with safe, scalable AI deployments.

Experience with a global footprint

Over 27 years

of industry experience

4K+

employees of
industry experience

1MM+

Crowdsourced
global resources

8yrs avg

partnership

+40%

3YR CAGR

Redmond

Est. 1997

NYC

Serbia

Spain

China

India

Singapore

Google   amazon   Microsoft   PayPal   Uber   THE HOME DEPOT   Walmart   PETSMART   Kraft Heinz   HBO   TESLA   UPS   FedEx   MASTERY   Expedia

Top Tier Partners with Industry Leaders

TD SYNNEX

- Full lifecycle support of in-store technology
- Ability to deliver technology at scale, on time, and on budget
- Over 3000 field resources able to support cameras, cabling, and edge devices

NVIDIA

- Metropolis Partner
- Validated Hardware Configurations
- Synthetic Data for GenAI and CV Training and Finetuning
- Labs Partner

Microsoft Partner

- Azure Modernization Gold Partner
- R&D Partners for CoPilot (OpenAI and LLM) and DFP (online fraud prevention)

Lenovo

- HW designed for unique requirements for compute on edge
- Certified solutions on the HW
- Scale out native zero trust deployments

LPF LOSS PREVENTION FOUNDATION

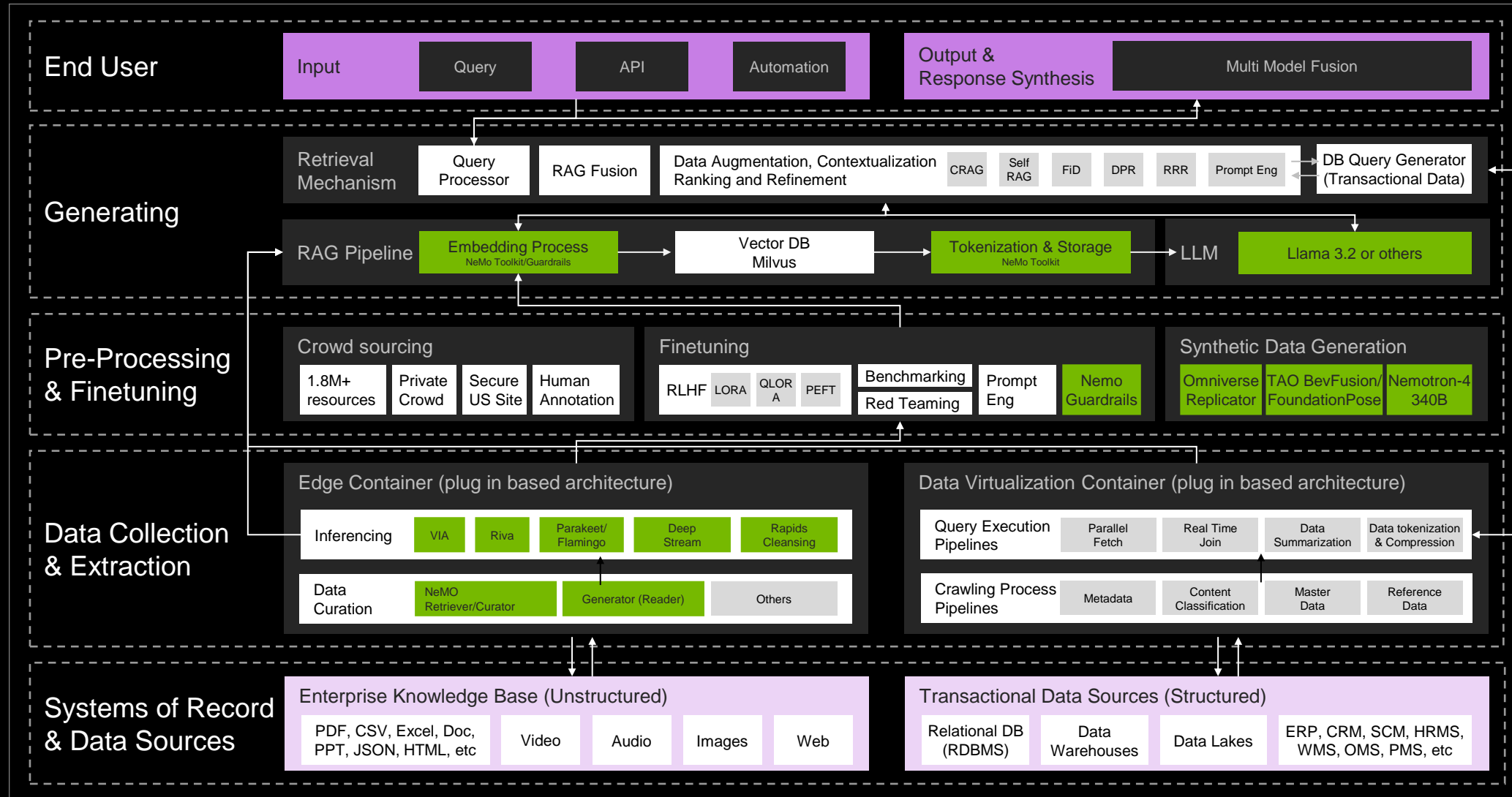**LPRC** LOSS PREVENTION RESEARCH COUNCIL

- Industry Partner.
  Solving asset protection, workplace safety for the Retail Industry

Frontier AI Data Foundry
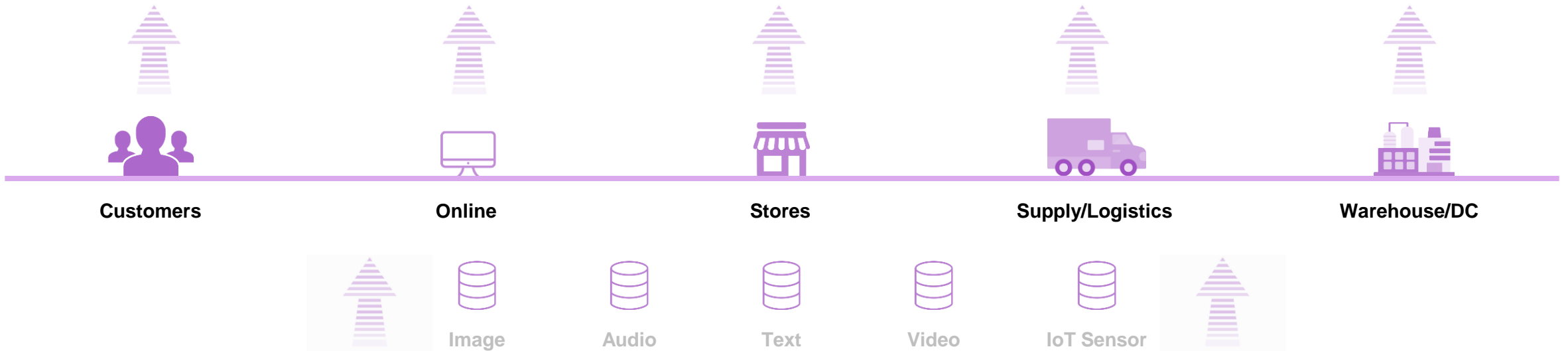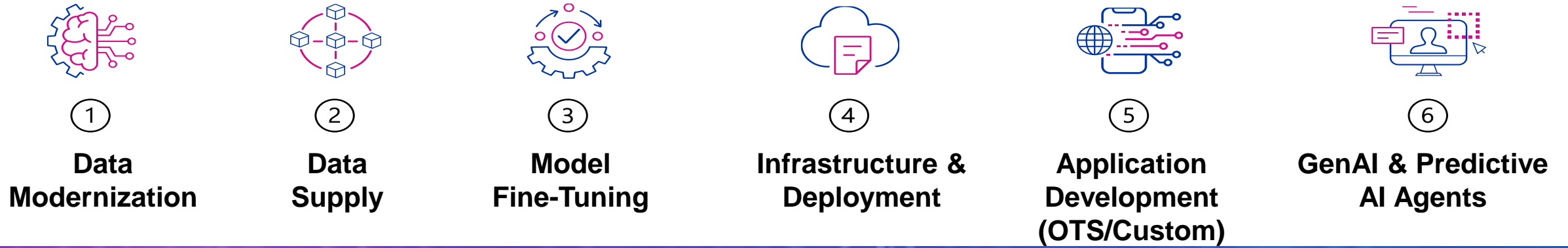
Modular AI Data Foundry architecture with NVIDIA

Available On Prem or Cloud

NVIDIA Tech Stack and NIMs

End User

Input	Query	API	Automation

Output & Response Synthesis	Multi Model Fusion

Generating

Retrieval Mechanism

Query Processor	RAG Fusion	Data Augmentation, Contextualization Ranking and Refinement	CRAG	Self RAG	FiD	DPR	RRR	Prompt Eng	DB Query Generator (Transactional Data)

RAG Pipeline

Embedding Process NeMo Toolkit/Guardrails	Vector DB Milvus	Tokenization & Storage NeMo Toolkit	LLM	Llama 3.2 or others

Pre-Processing & Finetuning

Crowd sourcing

1.8M+ resources	Private Crowd	Secure US Site	Human Annotation

Finetuning

RLHF	LORA	QLOR A	PEFT	Benchmarking	Prompt Eng	Nemo Guardrails
				Red Teaming		

Synthetic Data Generation

Omniverse Replicator	TAO BevFusion/ FoundationPose	Nemotron-4 340B

Data Collection & Extraction

Edge Container (plug in based architecture)

Inferencing	VIA	Riva	Parakeet/ Flamingo	Deep Stream	Rapids Cleansing

Data Curation	NeMO Retriever/Curator	Generator (Reader)	Others

Data Virtualization Container (plug in based architecture)

Query Execution Pipelines	Parallel Fetch	Real Time Join	Data Summarization	Data tokenization & Compression

Crawling Process Pipelines	Metadata	Content Classification	Master Data	Reference Data

Systems of Record & Data Sources

Enterprise Knowledge Base (Unstructured)

PDF, CSV, Excel, Doc, PPT, JSON, HTML, etc	Video	Audio	Images	Web

Transactional Data Sources (Structured)

Relational DB (RDBMS)	Data Warehouses	Data Lakes	ERP, CRM, SCM, HRMS, WMS, OMS, PMS, etc

A flexible & modular single platform

Customer Journey Analysis

Dwell Time Analysis

Store Analytics

Customer Service Optimization

Associate Efficiency

Out of Stock Reduction

Store Analytics

Assortment Optimization

Slip & Fall Reduction

Shrink Reduction

SOP Compliance

Marketing
Agent

Operations
Agent

Asset Protection
Agent

pitaya™ | powered by Centific's frontier AI data foundry platform

Pitaya

Supercharging your data

Pitaya is a SaaS platform that contains all the tools you need to manage your retail business.

Harnessing the power of Computer Vision AI and GenAI, together with business data, consumer data, and in store visual data, Pitaya supercharges your retail operations with actionable insights and empowers your store associates for efficiency, while unleashes a 360-degree view of the supply chain and sheds the light on opportunities to unlock sustainable growth.

KEY USERS

- Store Associates
- Loss Prevention
- Retail Ops
- IT Ops
- Marketing
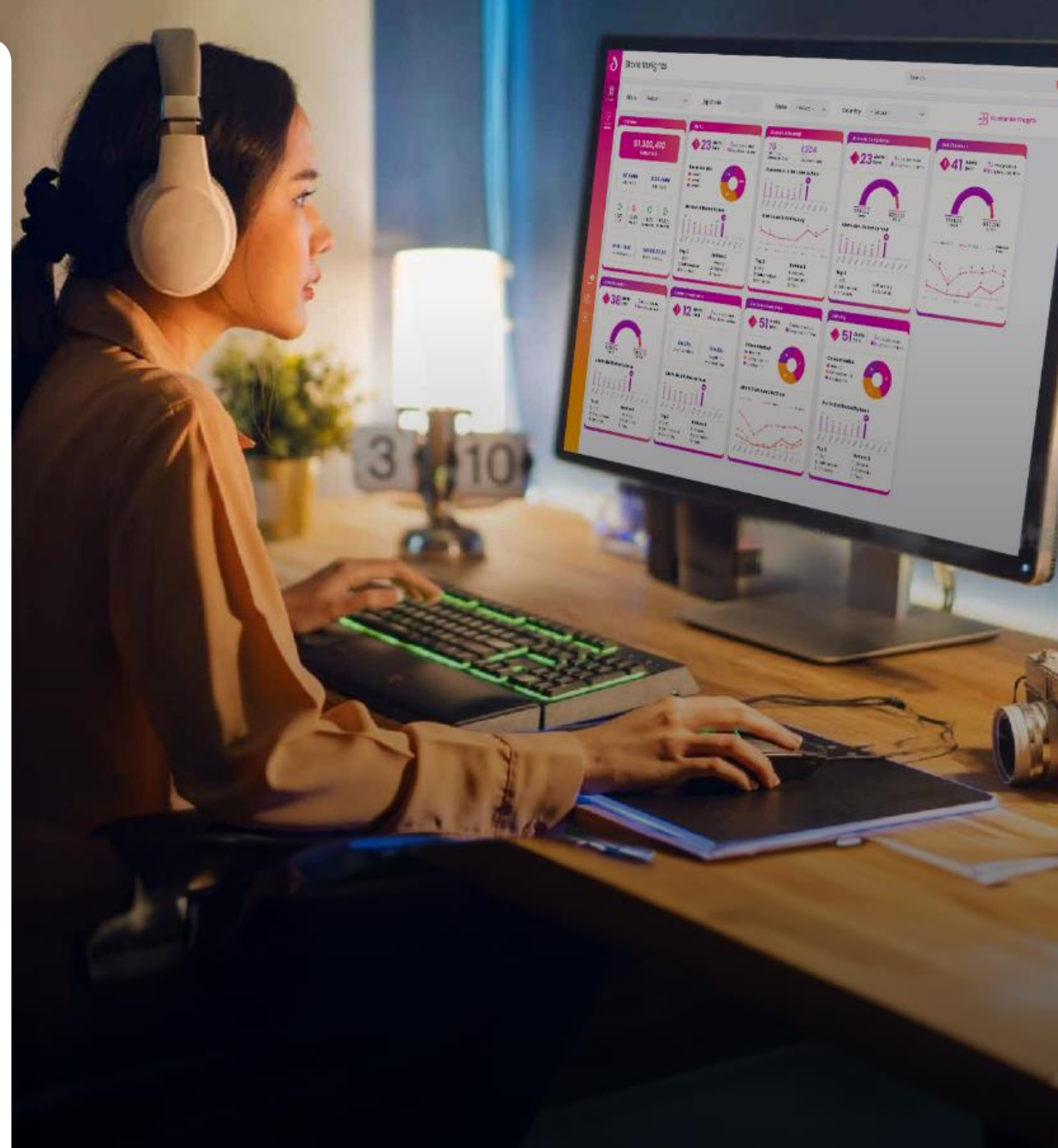- Merchandising
- Media

PRIORITY PROBLEM STATEMENTS ADDRESSED

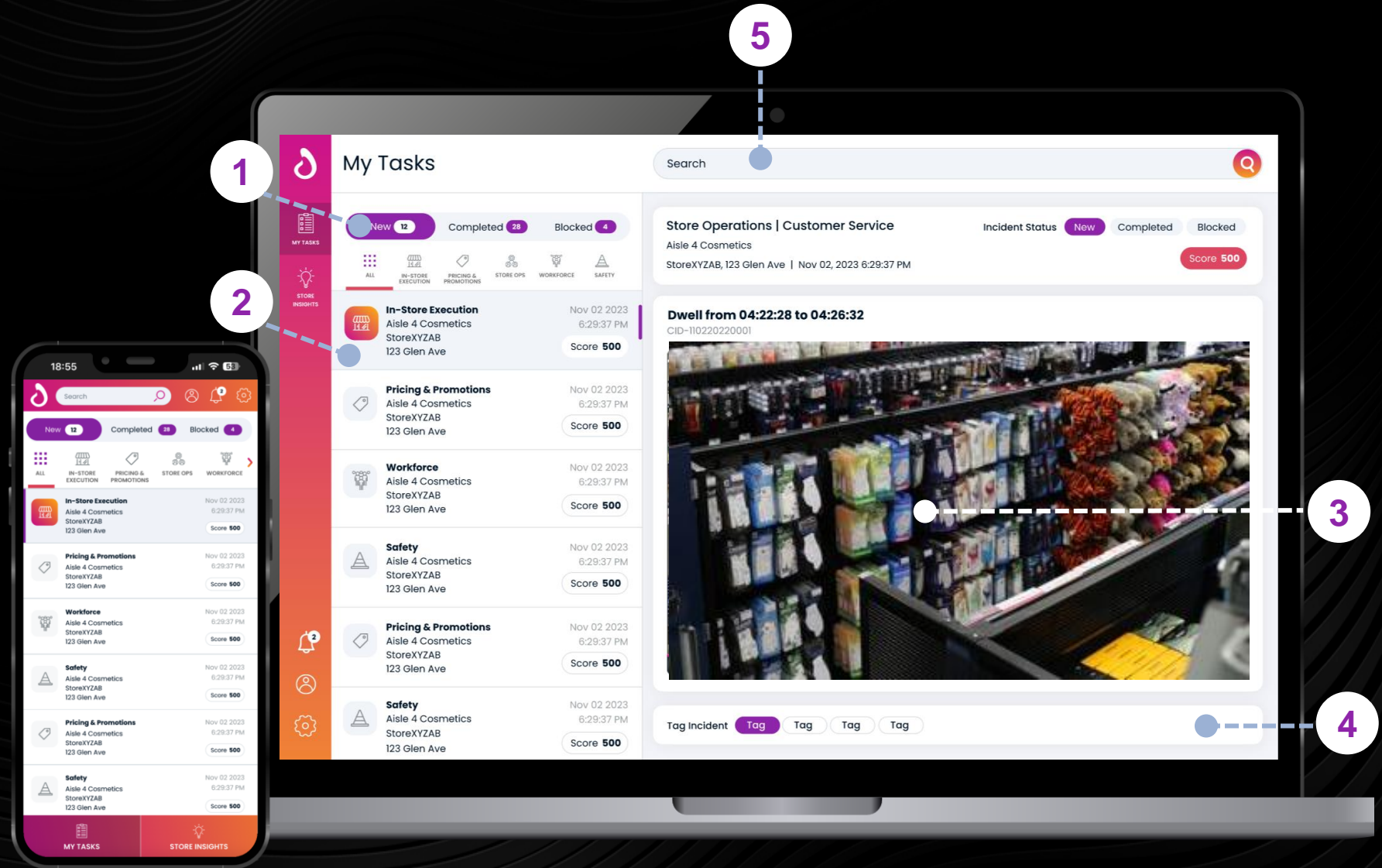| Asset Protection | Workplace Safety | Customer Experience | Retail Execution | Process Compliance |

Task Management

1 Quick one touch filtering

2 Task List Preview, ranked by business criticality

3 Task detail with evidence
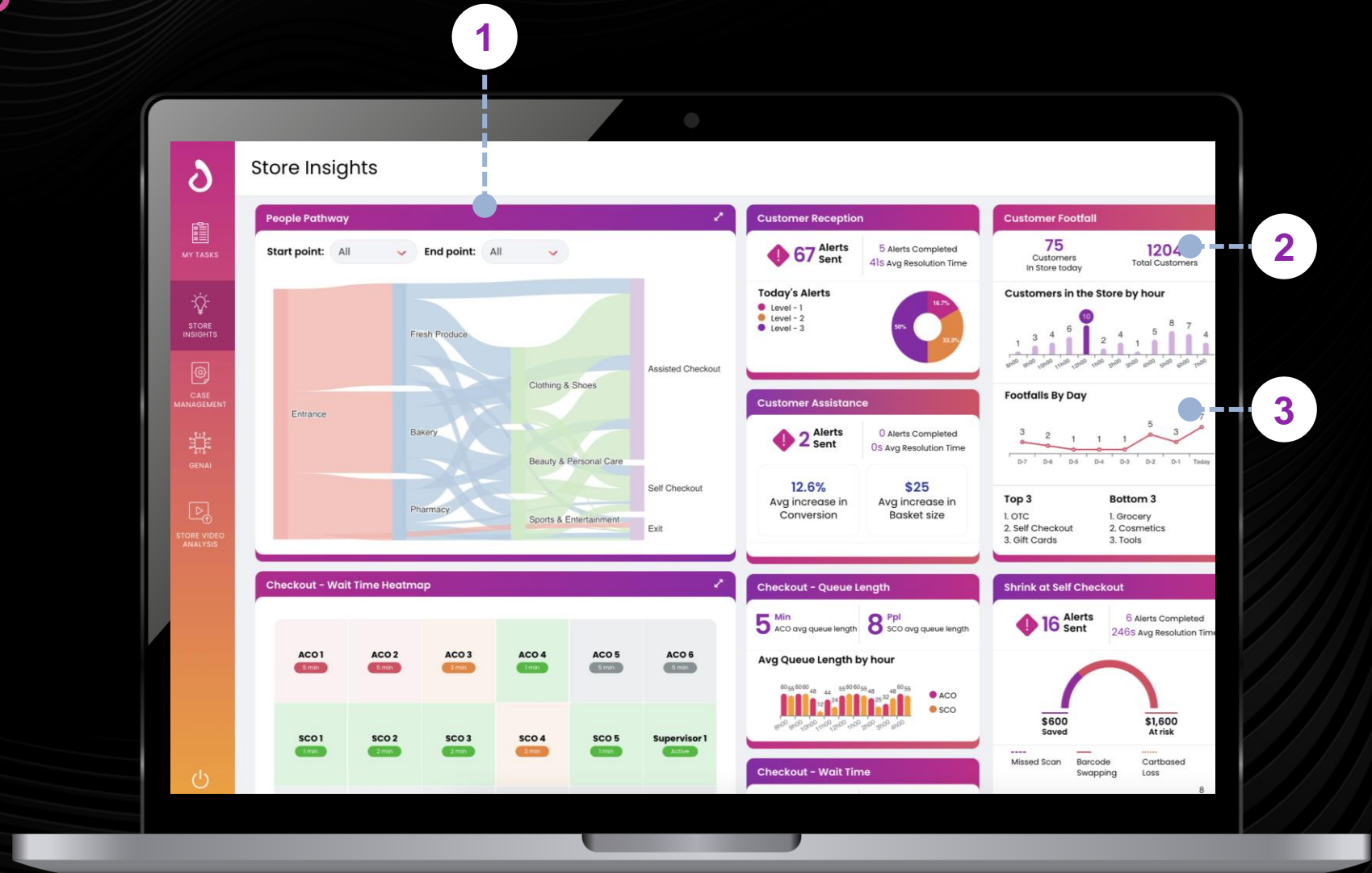
4 One-Click action

5 LLM Based Insights system

Store Insights

1. Drill up and drill down to the level of granularity you desire

2. Customize your dashboard with a widget library and snap-on grid

3. Widgets come in 3 different sizes, to offer insights at 3 levels of depth

Operational Insights

1 Drill up and drill down to the level of granularity you desire

2 Customize your dashboard with a widget library and snap-on grid

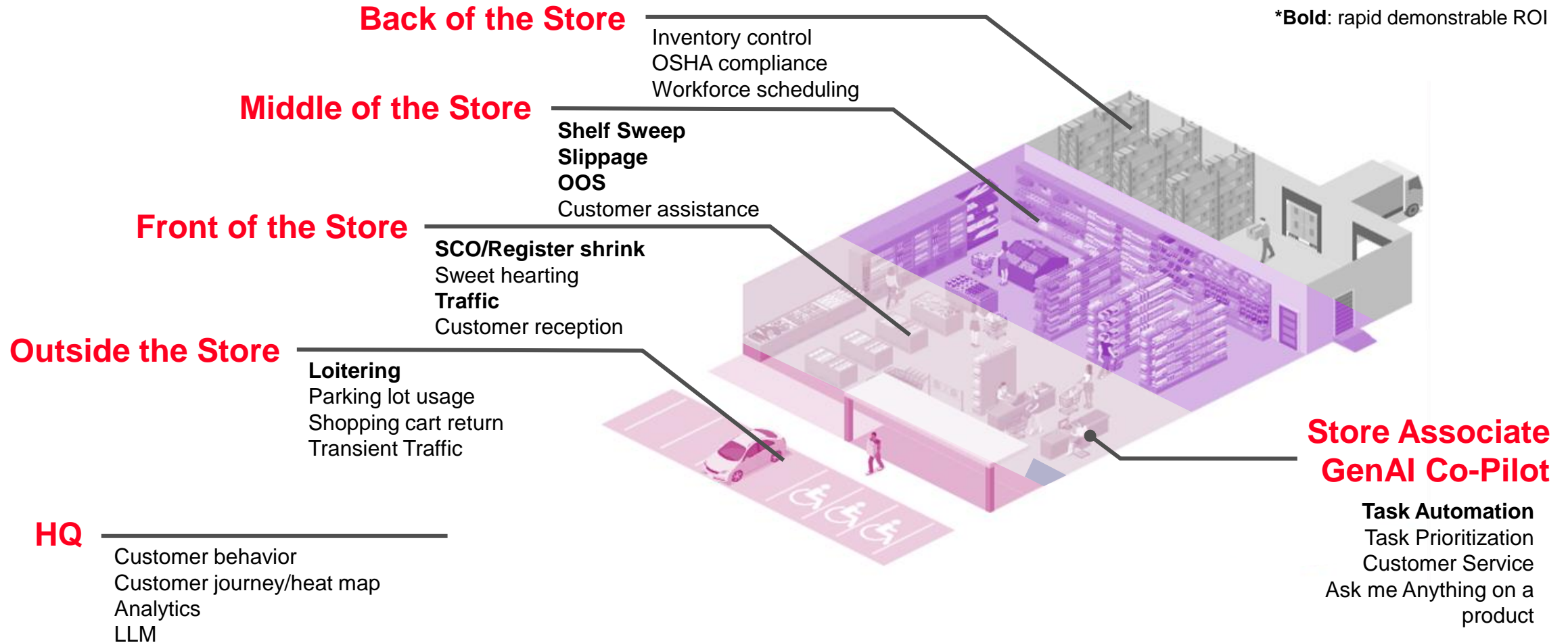**3** Widgets come in 3 different sizes, to offer insights at 3 levels of depth

Demo - Multi-Camera Tracking

Pitaya Demo

Multitude of business challenges to over come

Back of the Store

Inventory control
OSHA compliance
Workforce scheduling

Middle of the Store

Shelf Sweep
Slippage
OOS
Customer assistance

Front of the Store

SCO/Register shrink
Sweet hearting
Traffic
Customer reception

Outside the Store

Loitering
Parking lot usage
Shopping cart return
Transient Traffic

Store Associate GenAI Co-Pilot

Task Automation
Task Prioritization
Customer Service
Ask me Anything on a
product

HQ

Customer behavior
Customer journey/heat map
Analytics
LLM

Transforming DC Ops to a dynamic & intelligent state

Loading Efficiency

Pallet tracking
Forklift Route optimization
Shrink

Loading Dock Optimization

Real-time loading dock availability
Loading optimization

Vehicle Access Control

Automated Inbound
Automated Outbound

HQ
Traffic flow
Cargo Truck heat map
Advanced Analytics

Smart Warehouse

Multi Camera Object/People tracking
Robotics Automation with IOT

Parking

R/T Space Management

Vehicle Management

Vehicle Moving lines management
Vehicle planning and dispatch

Safety

OSHA Compliance
Real Time Alerts

One-stop shop

Full package of hardware & software with pre-trained and customizable AI models that can adapt to your business needs

Expandable Use Cases

Start with the most suitable use case to your business context and expand to multiple other use cases at ease with marginal effort from technical, maximize ROI of the infrastructure and platform already in place.

Real Time Alert

Instantaneous notifications to boots on the ground of events needing their attention via SMS, email, push notifications to devices such as Zebra, ear set voice message. Automated dispatcher device response based on business requirements.

Smart Task Management

Empower staff by helping them stay focused on what they need to do, in what order, at what location. Provide evidence and contextual information to support staff to be more efficient at their jobs.

Able to Fully Integrate

Standard API gateway ready to connect with any retail operation system, including POS, mPOS, NCR, ERPS, etc. Enable seamless data synchronization, streamlined workflows, and facilitate interoperability.

E2E Professional Services

From initial setup to continuous optimization, our dedicated customer success team works closely with you, providing ongoing support, training, and personalized assistance to ensure that you achieve maximum value and success.

Privacy Compliance

Our platform employs industry-leading encryption protocols and anonymization techniques to preserve data privacy while enabling seamless data processing and analysis. Full compliance with Safe and Ethical AI, the General Data Protection Regulation (GDPR), and the California Consumer Privacy Act (CCPA).

Partner Benefits

Why should partners support Centific and this approach

Sell Servers

Gen AI and Computer Vision solutions promise great benefits for customers they can only achieve by using servers and GPUs.

Sell Cameras and Network Components

One could argue that the most important component of AI solutions is data; Not the data you have but the data you don't. These 'blind spots' in our customers business can be addressed with cameras and computer vision and integrated into the existing environments with network components.

Sell Deployment Services

Delivering results for our customers can only be accomplished thru the successful scale out of the solution across our customers enterprise.

Differentiate from Competition

Winning depends on many factors, but differentiation from competition makes it easier for our prospects to select the right vendor and solution and for you to qualify and win business.

Open New Opportunities / Strengthen Existing

Partnering with Centific expands your potential opportunities with new clients and exposes you to new contacts within your existing customers. Your company will continue to become a strategic, solution providing, long term partner for your customers.

Grow Business

Expanding your solution portfolio to include Gen AI and computer vision solutions from Centific allows you to grow your business across many verticals.

Questions & Next Steps

Thank You