

SUPPLY CHAIN METAMORPHOSIS

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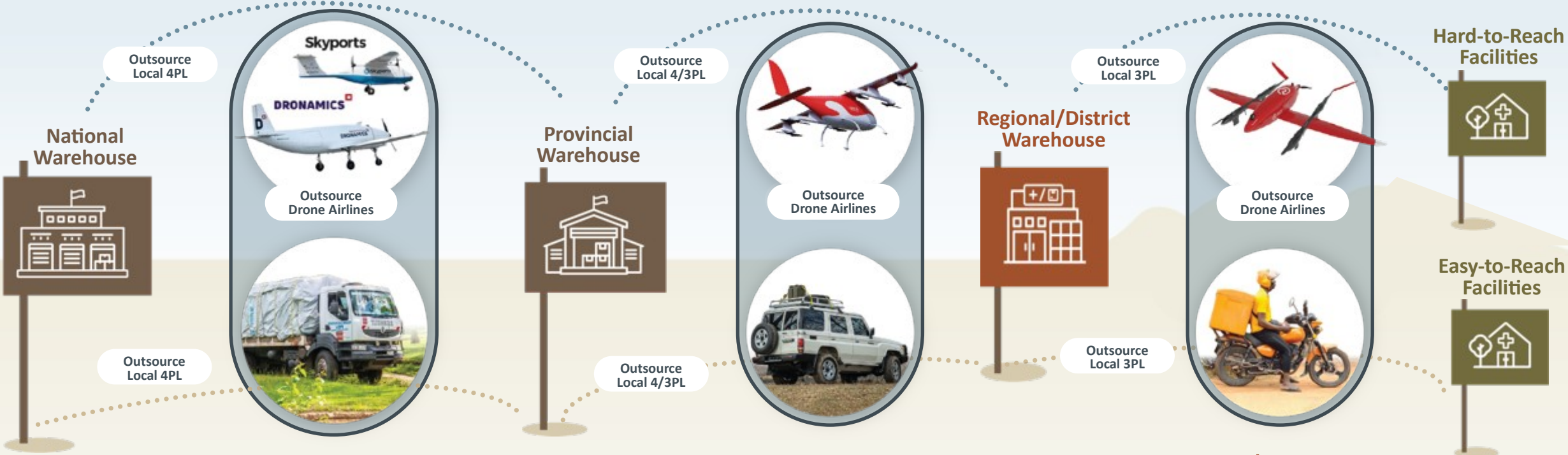


Unlocking Opportunities: Market Shaping for drone transportation

- **Prashant Yadav** - Affiliate Professor of Technology and Operations Management Academic Director, INSEAD Africa Initiative
- **Olivier Defawe** - Global Health and Innovation Development Expert, VillageReach
- **Shamit Shah, CEO** - Freight In Time, East Africa
- **Emer Keegan** - Managing Director: Supply Chain Optimisations, General Freight Cross Border and Namibia operations, DP World
- **Kiersten Dehaven** - Delivery Manager, Project Last Mile
- **Rob van den Bergh** - Regional Sales Director, OXIMIO sub-Saharan Africa, Kenya
- **Michael Merritt** - Strategy and Operations, Skyports Drone Services, UK
- **Anthony Wilson** - Director, Sales, DSV, South Africa

Cargo Drones – a green option to achieve responsive SCs

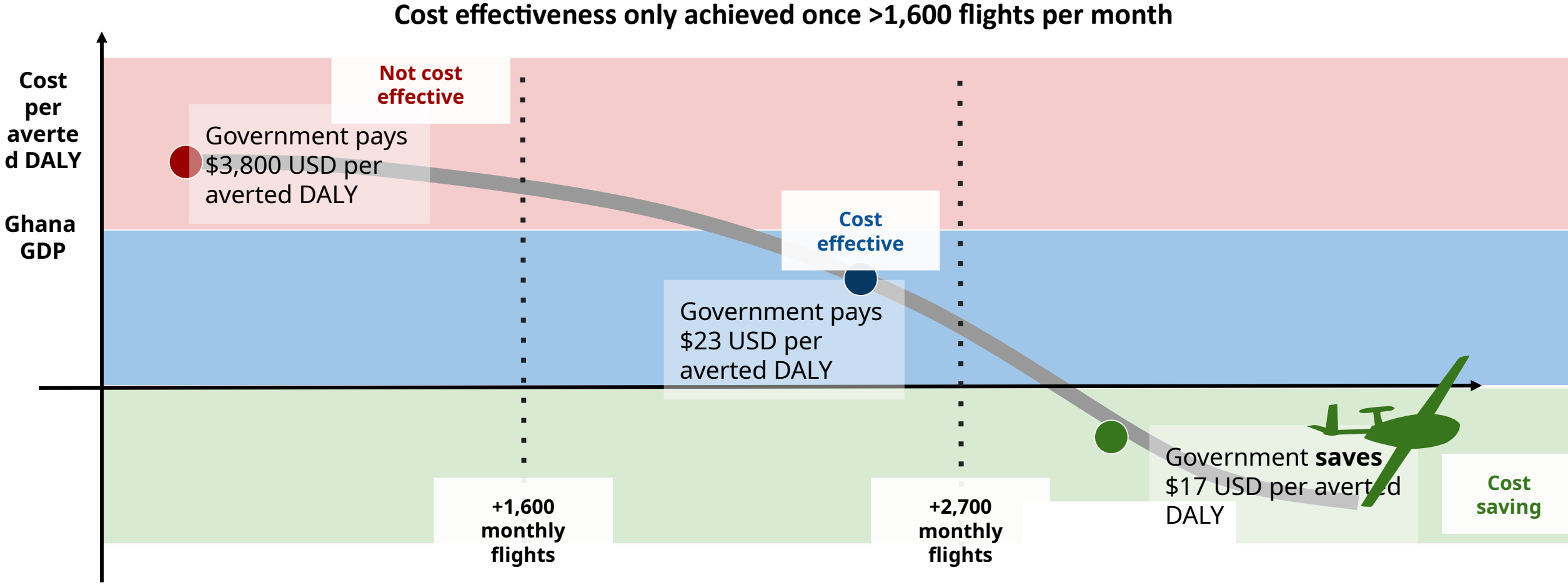
Use of fit-for-purpose mode of transportation to increase businesses efficiency and profitability



Specification	Dronamics	Pelican from Pyka	Orcas from Phoenix-Wings	Swoop Aero, Rigitech, Wing	Zipline	Matternet, Speedbird,
Payload Load	Up to 350kg/3500L	Up to 180kg/187L	Up to 15kg/96L	Up to 4kg/15L	Up to 4kg	Up to 10kg
Range	2,500km	400km	130km	125km	150km	20km
Landing/Take off	400m air strip	100m air strip	VTOL (helicopter style)	VTOL (helicopter style)	No landing at destination	VTOL (helicopter style)
%CO2 Reduction (%)	60		80			

Cost Effectiveness vs. Scale

Case Study #1: Zipline transport service in Ghana (July-20 to Dec-21)



Source: An impact assessment of the use of aerial logistics to improve access to vaccines in the west-north region of Ghana, Vaccine 2023.

Cost Effectiveness vs. Asset Utilization

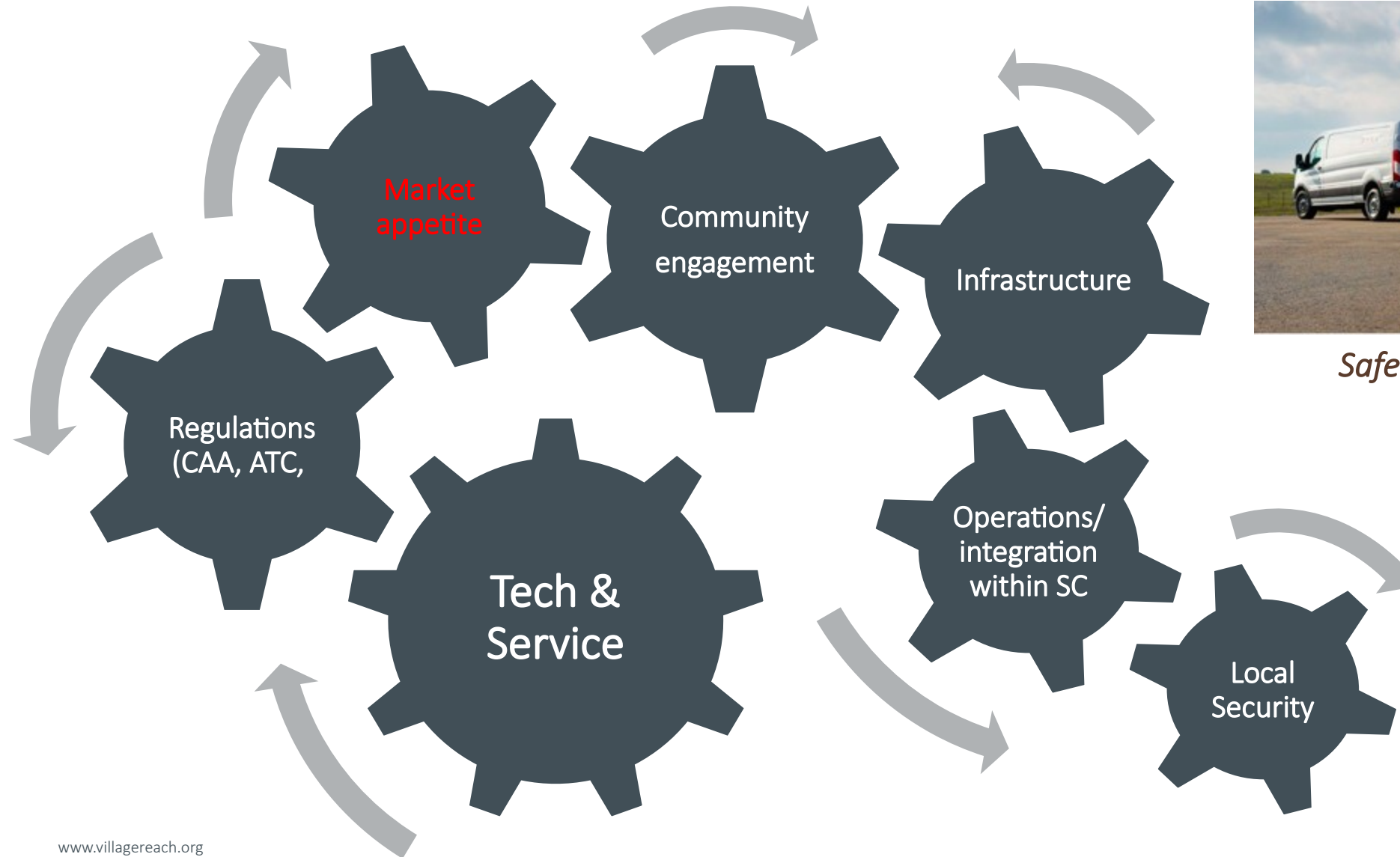
Case Study #2: Skyports/VillageReach drone transport service in DRC (Dec-20 to June-22)

Cost effectiveness achieved when asset utilization is optimized

		Before	After	After optimization
		Drone Introduction		
Cost	Cost per dose	\$0.58	\$1.84	\$1.19
Effectiveness	Multi-metric score (%)	21%	48%	48%
Cost-Effectiveness	Cost (\$K) per % of effectiveness	7.16	10.04	6.50
Asset utilization	Rate (%)	N/A	13	44%

Drone Delivery Ecosystem is Complex

Research on business models are lacking resulting in unpredictable market making private sector hesitant



Safe & Sustainable Drone Deliveries

Multi Sectorial Market Development Strategy

CURRENT STATUS

Drone logistics are **not considered** financially sustainable for public health markets

Levers to unlock affordable drone logistics for the health sector in low and middle-income countries

NEW STRATEGY

Cost-competitive & sustainable pricing for the public health market

• Public health



Sector Focus



• **Public & Private** health, agriculture, logistics, postal, maritime, disaster response, etc.

- **Customers funding** start-up costs (MoH or donors)
- **Single customer** paying for all recurring costs
- **One-pricing strategy** for customers



Business Model



- Drone service providers **fund** start-up costs in new markets
- **Multiple customers** to spread recurring costs amongst
- **Market-driven pricing strategy** for cost-sensitive customer

- **Small scale** leading to high unit costs
- No economies of scale



Network Scale



- **Large scale** leading to lower unit costs
- Economies of scale