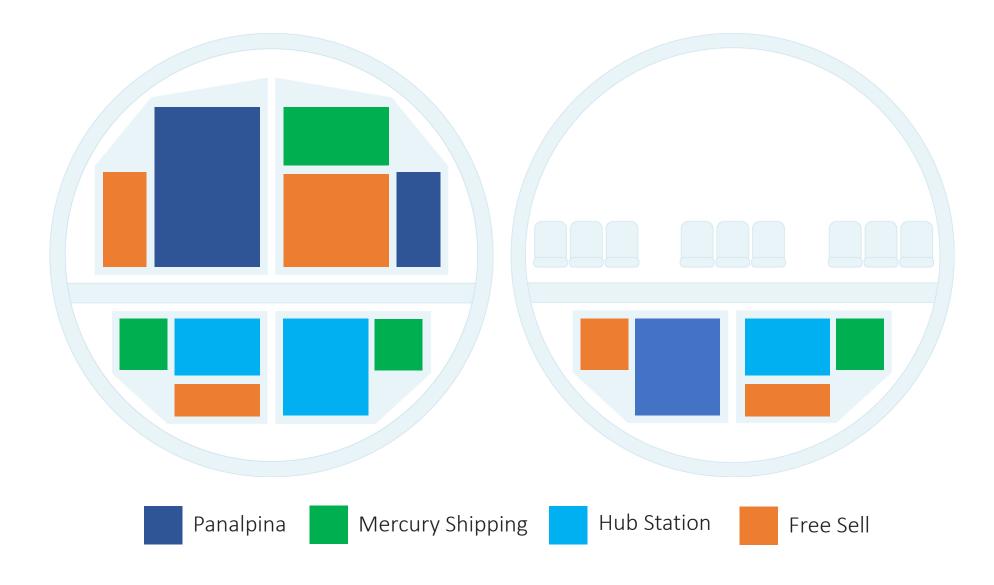


Optimal assignment of capacity



Accept the best freesell demand

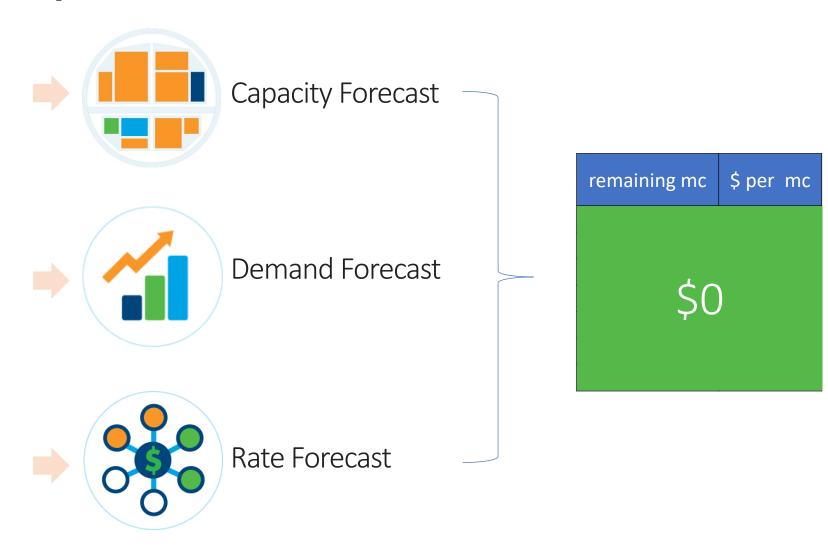


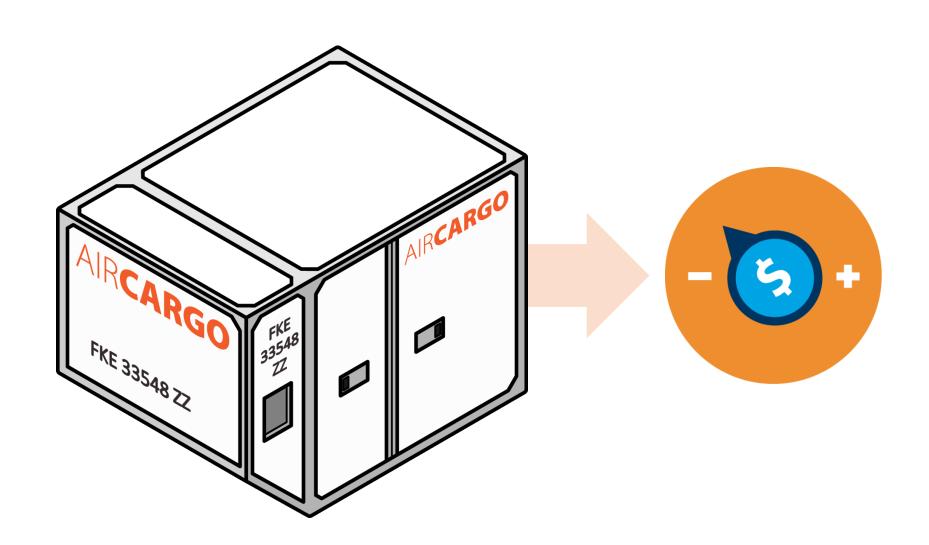




remaining mc	\$ per mc
0-2	362
3-5	340
6-8	315
9-11	291
1R1# F	274
15-17	248
18-20	222

Accept the best freesell demand







Lufthansa Cargo Digital Transformation

Double-digit percentage growth in online sales

"our customers know we are adamant on making this industry more digital. On the booking side we'll be able to offer spot prices in real-time in our online booking

system this year. So our customers really have an instantaneous view on which capacities are available on which route at which price"

Dorothea von Boxberg - Chief Commercial Officer, Lufthansa Cargo

Cargolux Digital Sales

Omnichannel, real time price distribution and rate optimization

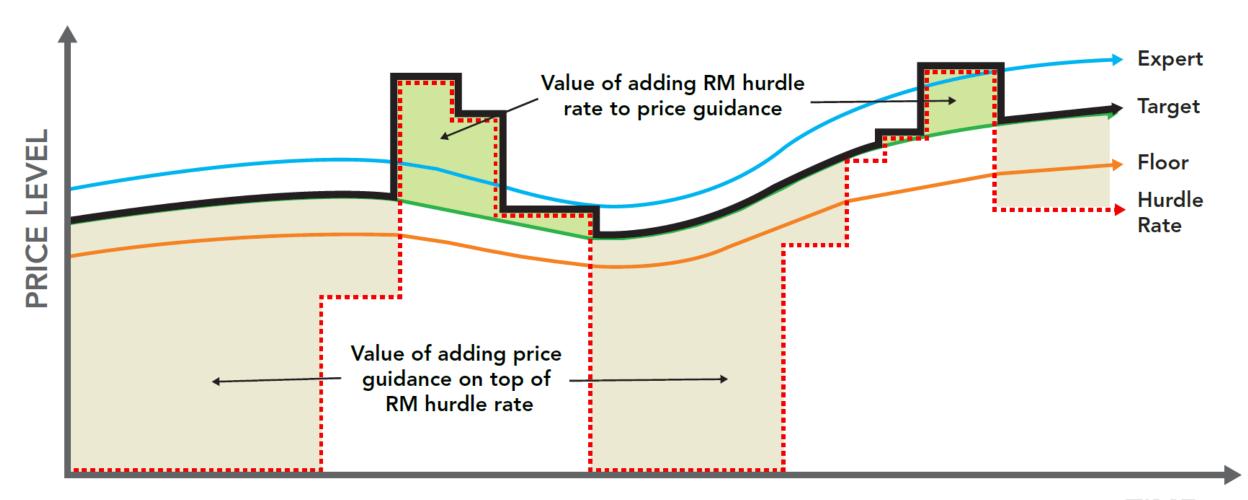
75% reduction in emails for manual price/quote approvals

LX-VCE

"LEAP is a digitized market management tool...that will enable Revenue Management, Sales & Customer Service departments to offer more transparency for pricing in an online platform. The system integrates the quoting, booking, and customer service aspects, creating a seamless, frictionless business transaction."

"Digitalization by Cargolux - Press Release, Cargolux"

RM + Pricing = no mistakes



Some Challenges in T&L RM

- Short booking window
- Steep booking curve near departure
- Booking vs. actual tendered discrepancy
- Volatility in demand
- Uncertain capacity
- Directional imbalance leads to repositioning
- Boom or bust

COTS and Custom

DiANNe:



Generates prescriptions directly from historical data

Direct

Inherently adapts to shocks and shifts in demand patterns



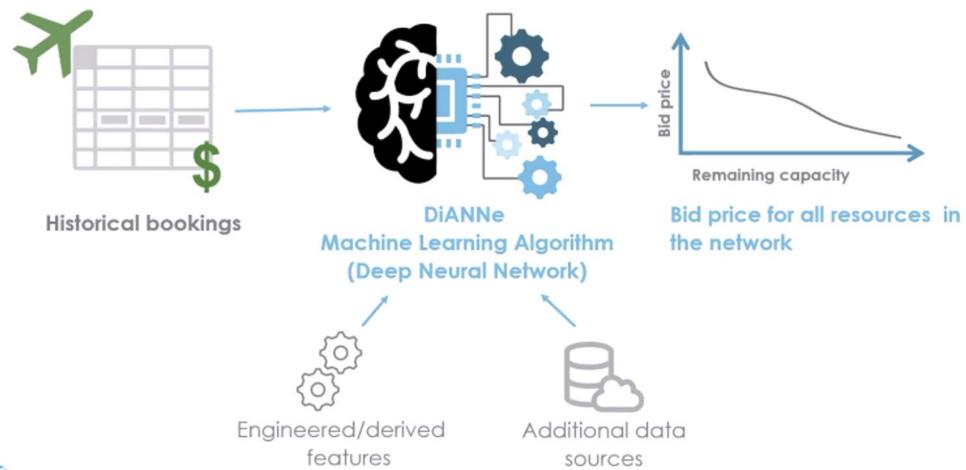
Uses a deep neural network algorithm for estimation

Neural **Network Based**





DiANNe Process: Prescribe from Data Directly





RM isn't a single solution

Demand Segmentation

Fixed Capacity

Continuous Pricing

Elasticity Forecasts

Competitive Pricing/ Availability

Multi-dimensional Pricing

Demand Segmentation

Fixed Capacity

Unconstrained Demand Forecasts

Rule-based Fixed Price Points

Demand Forecasts incl. Canx, No-show, Under tender

Network / Round-Trip RM

Partnerships / Interlining

Ancillary Charge Optimization

Product Alternate Evaluation Understanding of Fixed vs. Semi-fixed vs. Variable Costs

Dynamic Capacity Management

New Channels for T&L

RM Solution TCO

Segment Volume Growth Forecasts

Cost of Capital

Free-sale/ Block Mix Optimization

Other Customer Value Metrics

Price Optimization

Yield Management

Total Revenue Management

Margin Management

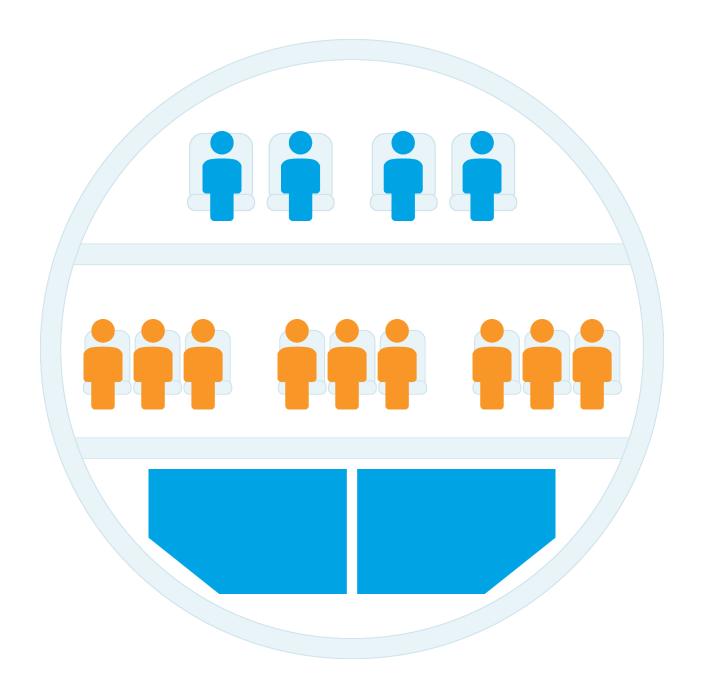
Discounted Lifetime Margin Management

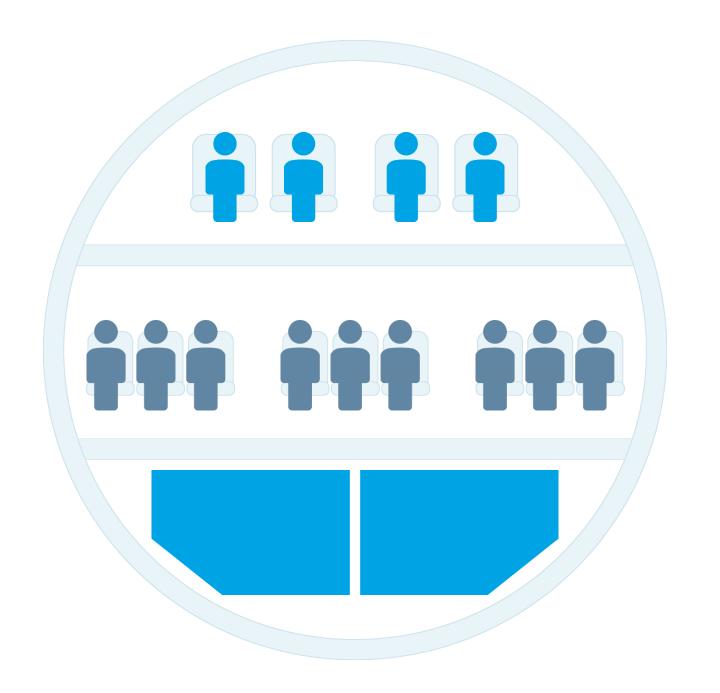


Industry players at different points of adoption journey

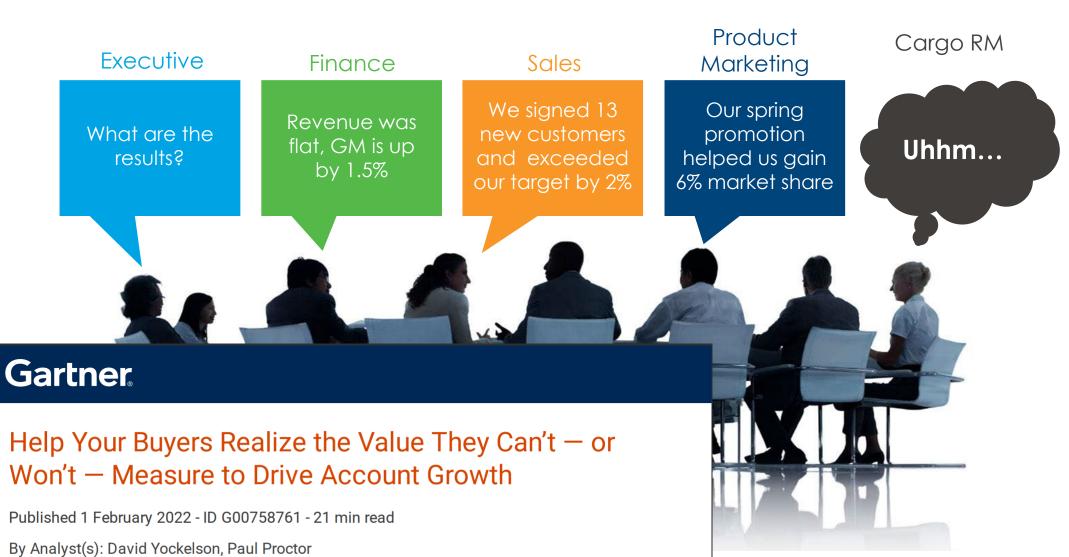
Industry Adoption		Rule-based Fixed Price Points
		Multi-dimensional Pricing
		Variable Cost Inclusion
	High	Competitive Pricing
		Dynamic Capacity Management
		Free Sale/ Block Mix Optimization
		Network/Round-trip RM
	Medium	Demand Segmentation
		Continuous Pricing
		RM Solution TCO
	Low	Demand Forecasts incl. Canx, No-show, Under tender
		Elasticity Forecasts
		Demand Unconstraining
		Ancillary Charge Optimization
		Distribution Capabilities Standardization
		Product Alternate Evaluation
		Long Term Forecasting / Cost of Capital
Future of RM		Semi-fixed/ Fixed Cost Inclusion
		Other Customer Value Metrics

Segment Growth Forecasts₁₅





Opportunity for Further Research



Value realization postsale should be a key customer health metric

Initiatives: Go-to-Market Strategy; Marketing Impact

