SEQUENCE MATTERS

GET THERE ON TIME



NT Logistics | September 2023

ABOUT



NT LOGISTICS

Arranging transportation is our core competency. It's all we do. Our people are dedicated to finding new processes, technologies, and strategies to save time and money while improving service. We work seamlessly with your organization by providing optimal solutions, staying in constant contact, and sharing our expertise.





>>> PROBLEM

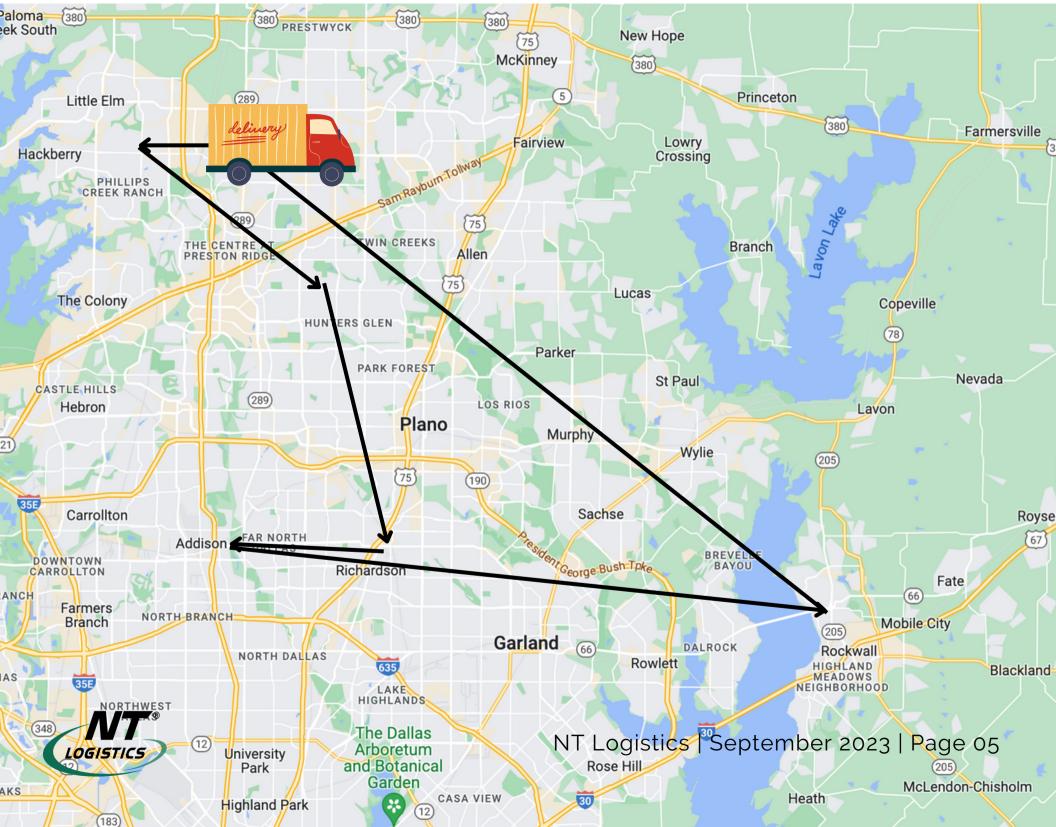
Given a starting point, determine the fastest way to five separate destinations, and return to the same origin point.

Does it matter how you get there?



SCENARIO ONE

	Street	City	State	Zip	Miles
ORIGIN	8700 Stonebrook Pkwy	Frisco	TX	75034	
1	8811 Teel Pkwy	Frisco	TX	75036	4.8
2	3905 Hedgcoxe Rd	Plano	TX	75025	10.2
3	433 Belle Grove Dr	Richardson	TX	75080	14.0
4	4900 Airport Pkwy	Addison	TX	75001	10.0
5	609 S Goliad St	Rockwall	TX	75087	31.3
RETURN	8700 Stonebrook Pkwy	Frisco	TX	75034	36.6
				TOTAL	106.9



CONSIDERATIONS

AVERAGE SPEED

The average speed of a delivery truck is essential for proper routing as it directly influences delivery schedules and operational costs.

SERVICE AREA

A larger service area might require different routing strategies to optimize deliveries efficiently, while a smaller area can lead to more focused and cost-effective routes.

DWELL TIME

Efficiently managing dwell time helps in creating more accurate schedules, reducing idling time, and improving overall delivery performance.

TRAFFIC PATTERNS

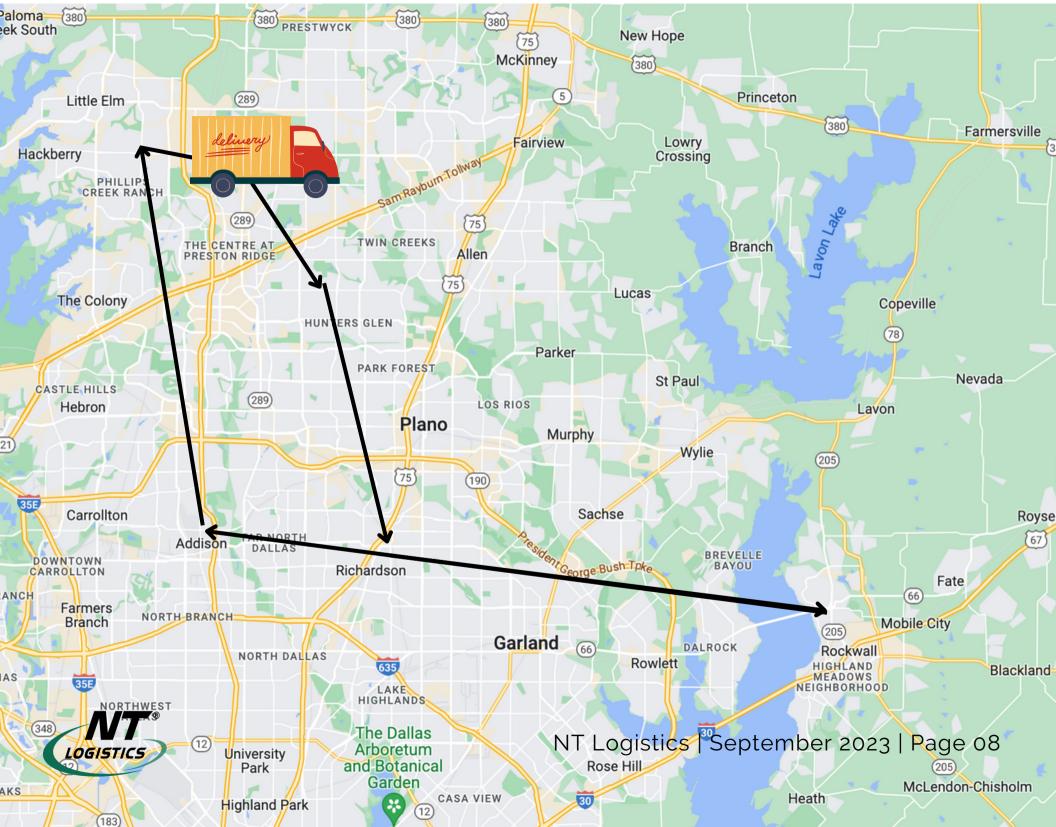
By factoring in traffic data and historical patterns, logistics managers can devise routes that not only save time but also reduce fuel consumption and improve overall operational efficiency.





SCENARIO TWO

	Street	City	State	Zip	Miles
ORIGIN	8700 Stonebrook Pkwy Frisco		TX	75034	
1	3905 Hedgcoxe Rd	Plano	TX	75025	6.0
2	433 Belle Grove Dr	Richardson	TX	75080	14.0
3	609 S Goliad St	Rockwall	TX	75087	20.4
4	4900 Airport Pkwy	Addison	TX	75001	26.3
5	8811 Teel Pkwy	Frisco	TX	75036	15.5
RETURN	8700 Stonebrook Pkwy	Frisco	TX	75034	4.9
				TOTAL	87.1



18.5% MILEAGE REDUCTION

Mileage reduction directly translates to cost savings through reduced fuel consumption and maintenance expenses. Additionally, minimizing mileage helps lower the carbon footprint, aligning with sustainability goals and environmental responsibility.





TIME

Identify the most efficient paths, minimize detours and delays, and ensure deliveries or journeys are completed swiftly.

DRIVERS

Alleviate the burden on drivers during challenging hiring periods by allowing them to cover their routes more efficiently, reducing stress and workload.

MONEY

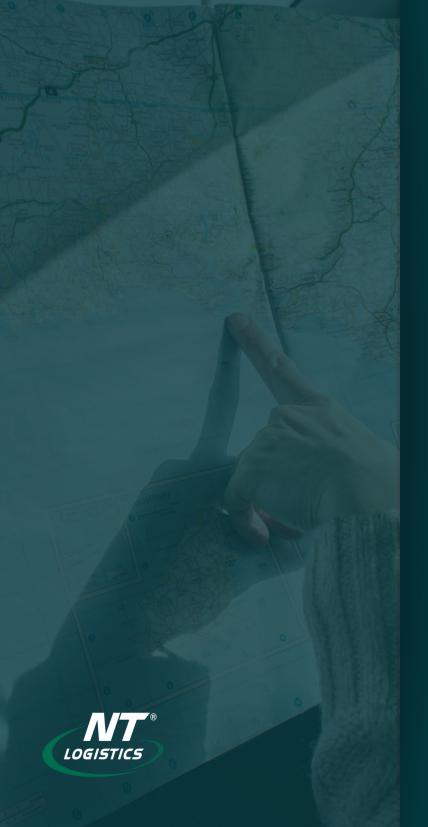
Streamline routes, reduce fuel and maintenance costs, and improve overall operational efficiency.





>>> SOLUTION

Optimized routing enhances customer satisfaction by ensuring timely deliveries, reducing the risk of delays, and improving overall service quality.





REAL WORLD PROBLEM

To accomplish the following analysis, eight weeks of real, "as routed", data was extracted from the TMS system and then manipulated through two additional scenarios using our routing optimization software. Once the routing scenarios were completed, the output was visually inspected to ensure that the software's output was feasible from a practicality standpoint.



REAL WORLD PROBLEM WEEKS 1 THROUGH 4

	# Trucks	Total lbs	Total stops	Avg lb / truck	Avg lb / stop
Week 1	14	443,586	144	31,685	2,880
Week 2	16	476,241	123	29,765	3,721
Week 3	15	501,724	117	33,448	4,288
Week 4	14	456,821	119	32,630	3,839





REAL WORLD PROBLEM WEEKS 5 THROUGH 8

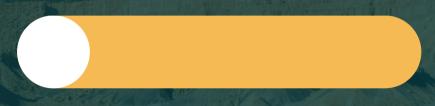
	# Trucks	Total lbs	Total stops	Avg lb / truck	Avg lb / stop
Week 5	12	487,824	116	40,652	4,205
Week 6	15.5	603,050	147	38,906	3,891
Week 7	9	338,689	88	38,601	3,860
Week 8	14	571,945	130	40,853	4,085



>>> THE RESULTS



16% fewer trucks



8% reduction in stops



6% increase in total lbs





20% increase in truck weight



In the previous example, the freight was critical in the sense that we were carrying medical products. Likewise, when working with perishables, we recognize how important it is to get this right, with timeliness and safety being of the utmost importance.



Do not go where the path may lead. Go instead where there is no path and leave a trail."

RALPH WALDO EMERSON





THANK YOU

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