



Thinking in 360 Degrees. Making it Happen.

A Holistic Approach To Integrating Fixed Route and Demand Response Services

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First, a few factoids



- Paratransit is costly
 - The more your customers ride, the more you pay

- Fixed route is also costly
 - You definitely pay a big capital cost up front, but....
 - The marginal cost is better than paratransit

How to maximize your investment

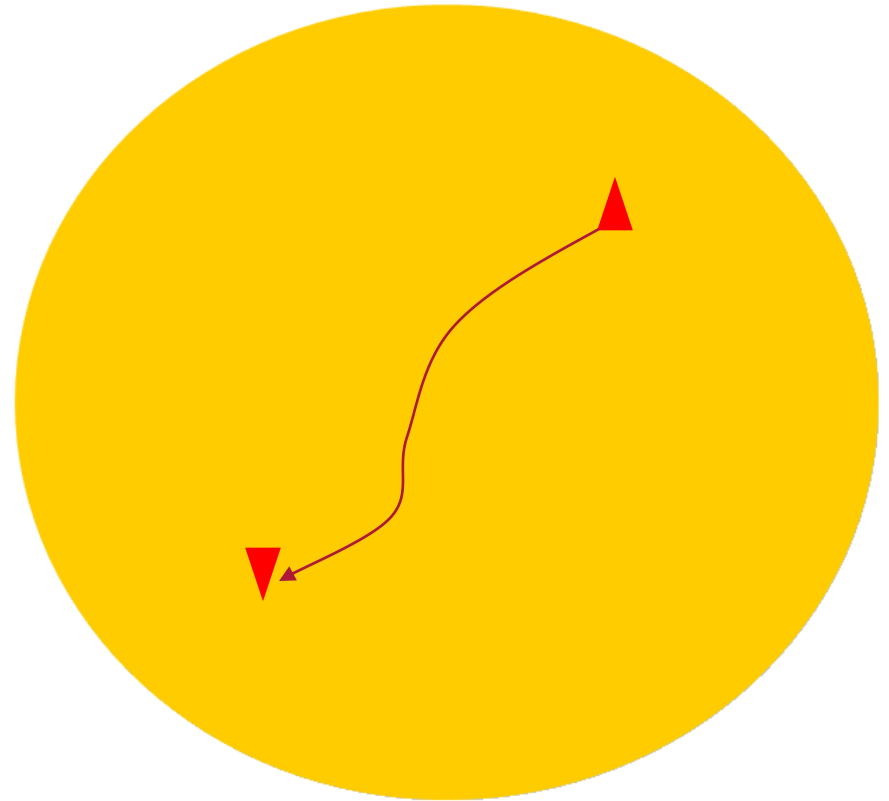


- Leverage the fixed route system wherever possible:
- Consider fixed route or flex service options
 - As alternatives to paratransit
 - As complements to paratransit

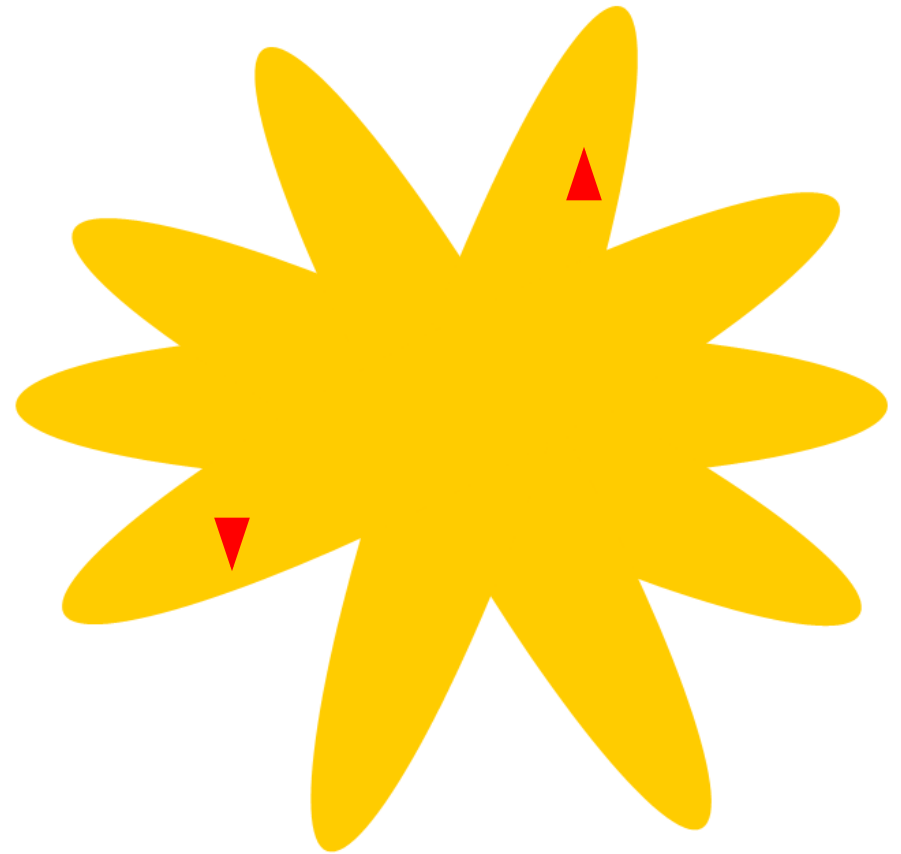
...for part of all of the rider's journey, as their personal mobility permits

- The key is to have all service mode options available to the reservation agent who is taking a demand response service request.
- Information on modal options also needs to be available to service planners as they are considering the implications of service changes.

- Service area polygon

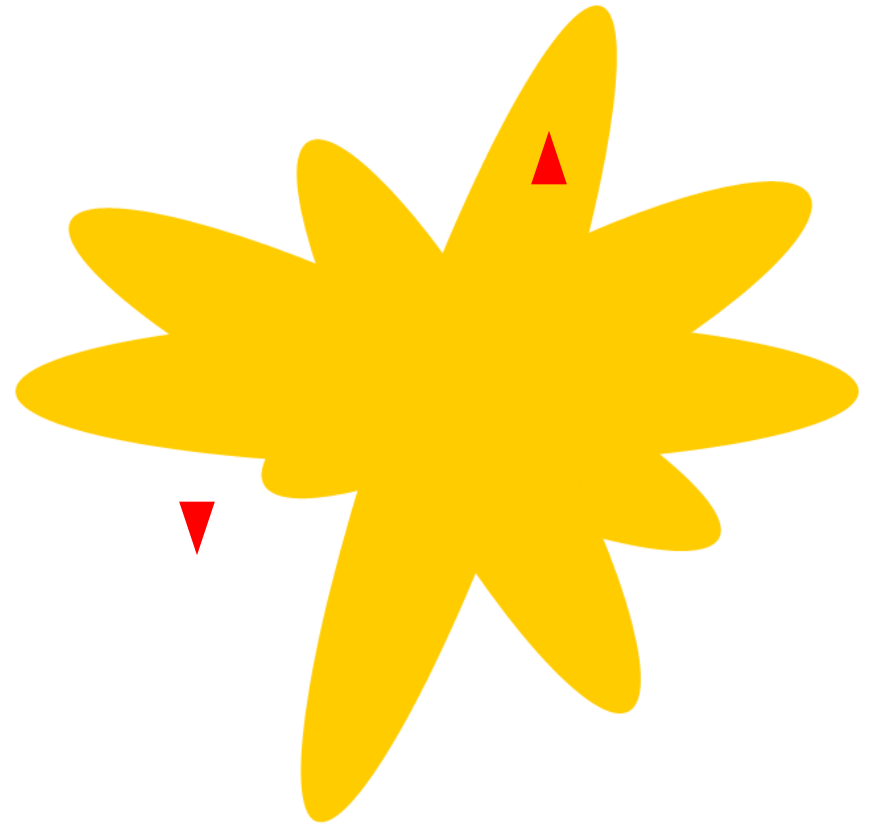


- ADA route polygons



Evolution of the ADA service area test

- Time-dependent service area polygons

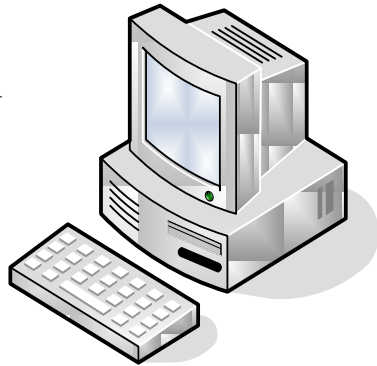


Collecting para and fixed solutions

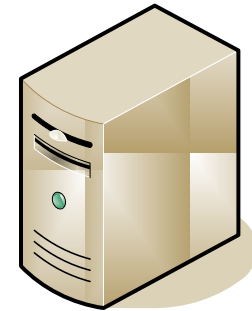


How it works.....

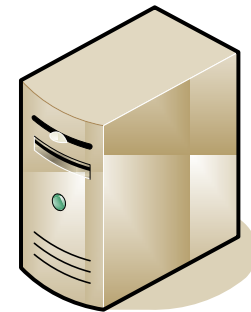
Reservation Agent



Origin
Destination
Date
Time



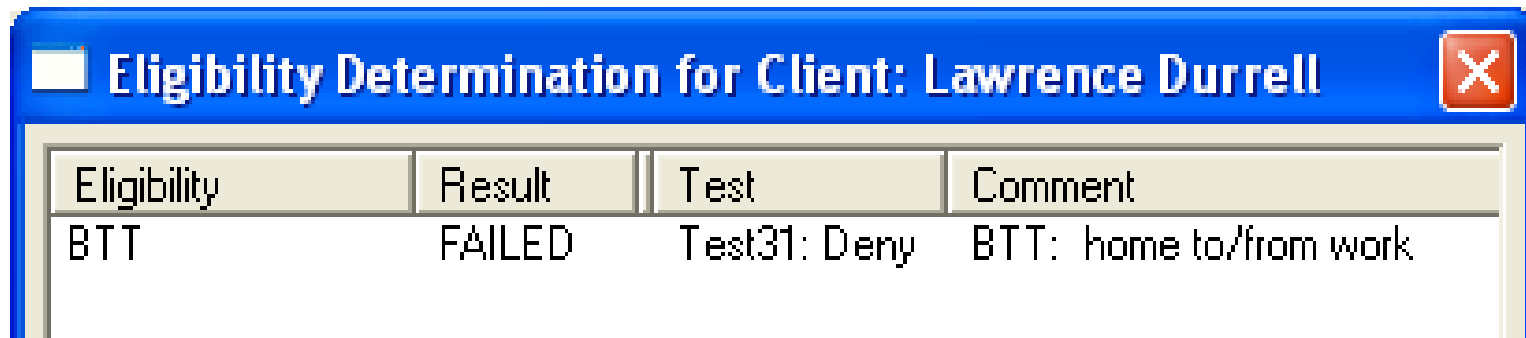
Paratransit solution



Fixed Route
Trip Planner

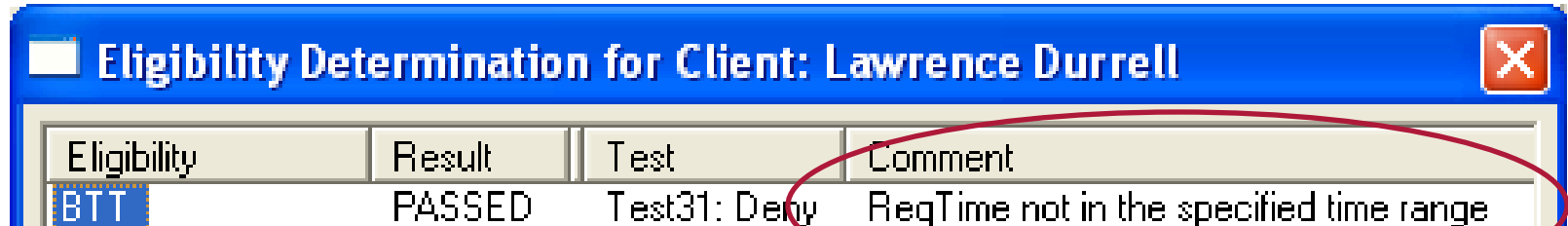
Conditional Eligibility

- Eligibility conditions allows you to tailor your service offering to riders who may only be authorized to use paratransit in specific situations
 - Each client can be assigned one or more eligibility conditions
 - When booking a trip, the reservation agent can be informed if the client's eligibility conditions do not justify paratransit service for the requested trip.



Eligibility	Result	Test	Comment
BTT	FAILED	Test31: Deny	BTT: home to/from work

What happens after the last bus?



Eligibility	Result	Test	Comment
BTT	PASSED	Test31: Delay	ReqTime not in the specified time range

Additional Comparability Issues

- Comparable Fare



- Comparable Ride Time



Fixed route alternatives at your fingertips



Itinerary	Xfrs	Depart	Arrive
8, 6	1	8:10	9:15

Time	Stop	Line	Direction
8:10	ElcCrylB	8	Inbound
8:59	JacPreWB	8	Inbound
9:00	JacPreEB	6	Eastbound

nel 1 of 1

Reporting Analysis



Trip Plan Analyzer Report

Demand Response Trip					Comparison			
From Address	To Address	Date Time	P/D	BookingId ClientId	Issue	Fr Time Dr Time	Fr Fare Dr Fare	Bar
1867, 62ND ST	LAFAYETTE COFFEE SHOP:250, HYDE ST	2007-09-21 08:45	P	368959 225	Time	00:32 01:16	1.5 2	Sept 21
635, 33RD AVE	ASIA SF:201, 9TH ST	2007-09-21 12:30	P	369006 249	Time	00:20 01:08	1.5 2	Sept 21
635, 33RD AVE	ASIA SF:201, 9TH ST	2007-09-21 12:30	P	369006 249	Time	00:28 01:08	1.5 2	Sept 21
635, 33RD AVE	ASIA SF:201, 9TH ST	2007-09-21 12:30	P	369006 249	Time	00:39 01:08	1.5 2	Sept 21
LAFAYETTE COFFEE SHOP:250, HYDE ST	1867, 62ND ST	2007-09-21 16:30	P	368959 225	Time	00:16 00:54	1.5 2	Sept 21

Why It's Useful

- Site had complaint alleging that paratransit ride times were too long. Analysis proved that the transit authority was in compliance:
 - *Showed that 97%+ of its paratransit trips were within 10 minutes of a comparable fixed route ride and 8.3% of their trips qualified as non-ADA because no fixed route alternative existed. The dispute was resolved successfully.*
 - *The agency now tests for the availability of fixed route as part of its trip booking process to prevent issues in the future.*

Service Planning

Trip Plan Analyzer [Wizard] [Edit]

Batch (Feb 2009) | Clipboard | Compare

	Result	Duration	Origin	Destination	Date	Time	Arriv
✓	7	7	2950, STANTON ST	CAFFE FOCACCIA:55, 2ND S	02-02-20	12:15	DEP
✓	5, 3	1h02	120, ABBOT AVE	WARFIELD HOTEL:118, TAYL	02-02-20	12:15	DEP
✓	3	0	802, SACRAMENTO ST	MAIN STREET:345, TAYLOR	02-02-20	12:15	DEP
✗	No Itine		1549, MUNSON WAY	STAR OF THE SEA ELEMENT	02-02-20	12:15	DEP
✓	3	6	68, SHARON ST	HERTZ-PAN PACIFIC HOTEL:5	02-02-20	12:15	DEP
✗	No Tim		198, RED ROCK WAY	ROCCO'S CAFE:1131, FOLSO	02-02-20	12:15	DEP
✓	7, 3	9	1867, 62ND ST	LAFAYETTE COFFEE SHOP:2	02-02-20	8:45	DEP
✓	3, 7	35	LAFAYETTE COFFEE SHOP:2	1867, 62ND ST	02-02-20	16:30	DEP
✓	7	7	3008, TREMONT ST	JER MAE RESTAURANT:696,	02-02-20	9:45	DEP
✓	7	13	JER MAE RESTAURANT:696,	3008, TREMONT ST	02-02-20	20:15	DEP
✓	3, 5	1h11	97, TUSCANY ALY	CAFE MANILA:6055, MISSION	02-02-20	8:00	DEP
✓	5, 3	59	CAFE MANILA:6055, MISSION	97, TUSCANY ALY	02-02-20	19:00	DEP
✓	3, 8	17	746, MINNA ST	JOANIE'S RESTAURANT:5176	02-02-20	8:45	DEP
✓	6, 3	1h03	JOANIE'S RESTAURANT:5176	746, MINNA ST	02-02-20	15:45	DEP

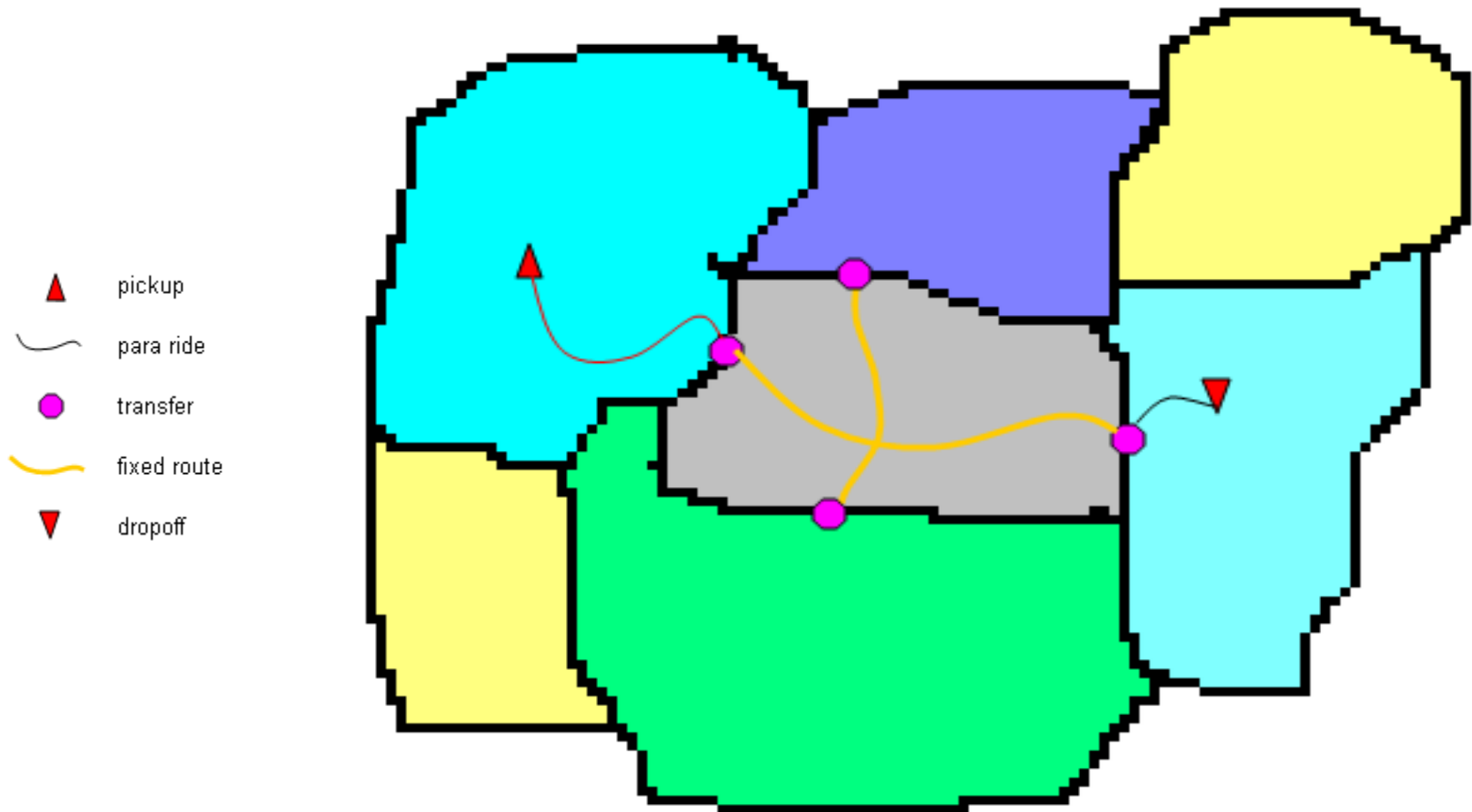
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- Evaluate a client's potential eligibility
 - Certification: Home to Work, Doctor, etc.
 - Recertification: Frequent trips

A combination of fixed route
and paratransit feeder....

Run	Desc
F-3033-301	FFP
F-3033-301	FFP
115	PFP
706	P
707	P
742	P
754	P

How does multimodal work?



Summary – Benefits of a Holistic Approach



- ADA comparability
 - service availability
 - Fare
 - ride time

- Service planning
 - Impact of proposed fixed route changes

- Service alternatives
 - Bus Travel Training opportunities
 - Fixed/flex route alternatives
 - Multimodal (feeder) solutions