

Abstract geometric lines in the top-left corner of the slide, consisting of several thin, black, overlapping lines that form a complex, non-representational pattern.

UTILIZATION ANALYSIS

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PROBLEM OVERVIEW

PILOT Experiment

We were measuring teams that were part of a pilot to measure a 10% utilization requirement in order to transition to Support vs our traditional 20% requirement. Utilization Requirement is a specific number of Expense Reports or Invoices that need to be submitted to validate the customers site to ensure it's working correctly BEFORE we can transition a project to Support (which is then considered completed)

- Example, a customer is contracted for 100 Expense Reports or Invoices - 20% is 20 reports, 10% is 10 reports.

Questions

- How can lowering utilization rates affect, the time it takes to complete a project?
 - What role does the activation experience play in this?
- Are there any other attributes and correlations that could present observable significance regarding the performance between of the two groups?

DATASET OVERVIEW

Key Metrics

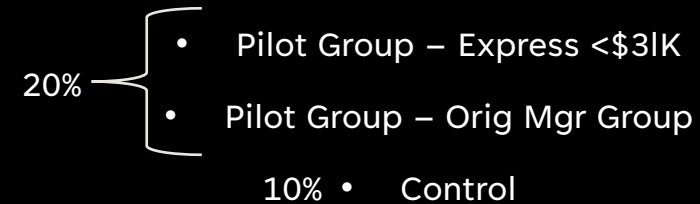
- Hours Per Project (HPP)

(Hour between Contract date → Implementation Complete Date)

- Days Per Project (DPP)

(Days between Contract date → Implementation Complete Date)

Utilization Groups



Activation Experience

Values: Express, Guided Workshop, Directed 1:1

- Activity Experience Grouping
- Quarterly Comparison
- Skew in distribution

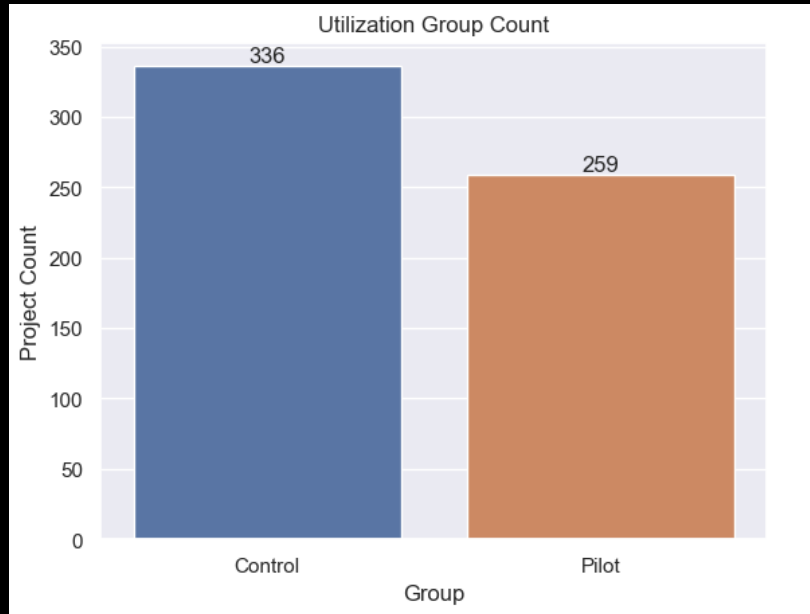
Activation Coach Productivity

Considerations include:

- Activation Experience Grouping
- Quarterly Comparison
- DTV and HPP as productivity measure

DATASET OVERVIEW

Control vs. Pilot



```
isPilot
Control    0.564706
Pilot      0.435294
```

Quarterly Trends

		project_count
isPilot	TransCSYearQuarter	
Control	2022-4	111
	2023-1	225
Pilot	2022-4	95
	2023-1	164

```
TransCSYearQuarter
2023-1    389
2022-4    206
2022-3      7
2022-2      1
```

PROCESSING

Create clean DataFrame Tables with overall statistics on key columns

- Utilization Group (Pilot: 10%, Control:20%)
- YearMonth, YearQuarter
- HPP, DTV

EXPLORATION

Python Pandas in tandem with Excel

VISUALIZING

- Temporal graphs
- Statistical analysis between groups

ANALYZE

Implications and results of the Utilization Rate Experiment

APPROACH

STATISTICAL OVERVIEW

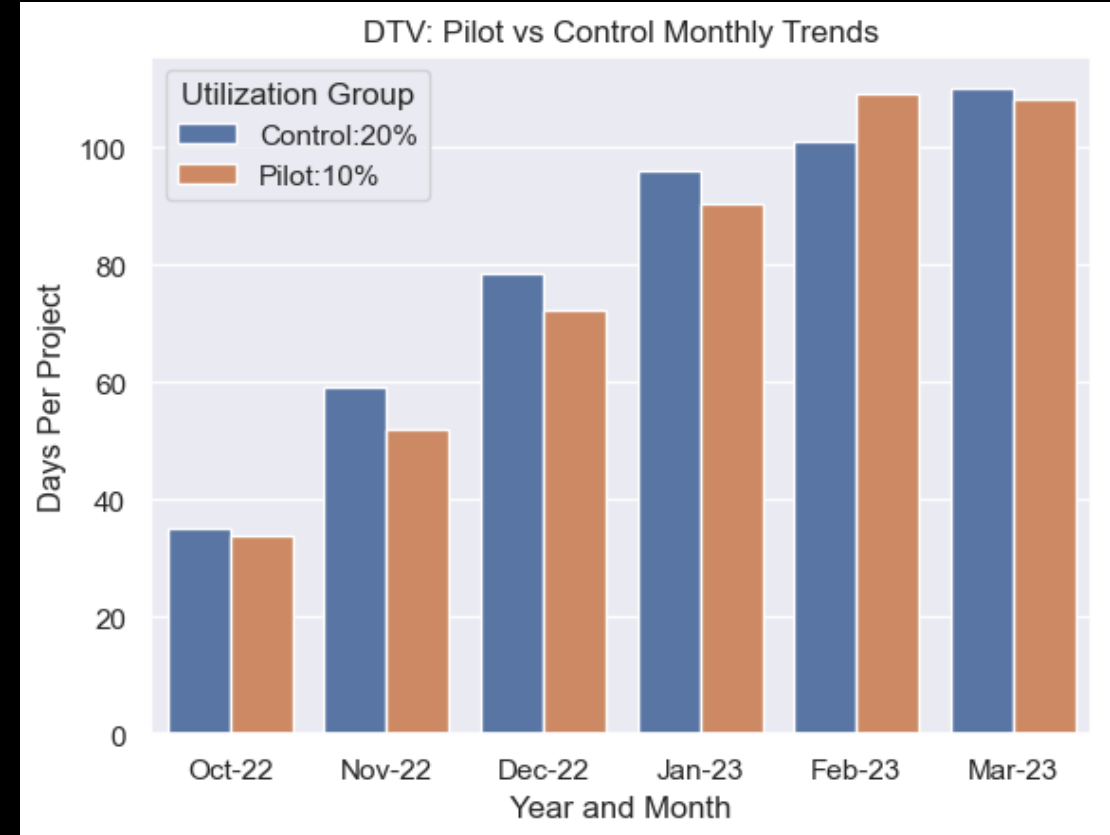
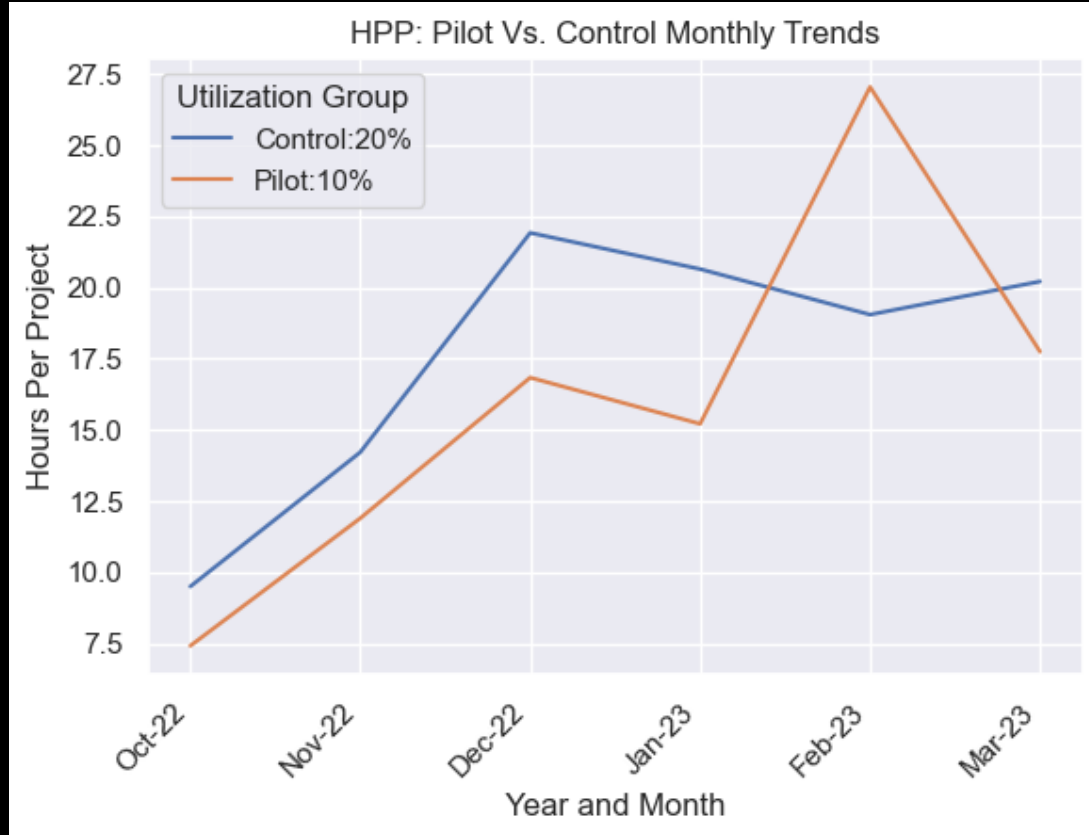
HOURS PER PROJECT

		project_count	HPP_sum	HPP_mean	HPP_median
isPilot	TransCSYearQuarter				
Control	2022-4	111	2011.56	18.122162	15.00
	2023-1	225	4458.35	19.814889	15.77
Pilot	2022-4	95	1318.50	13.878947	10.00
	2023-1	164	3481.22	21.226951	15.75

DAYS PER PROJECT

		DTV_sum	DTV_mean	DTV_median
isPilot	TransCSYearQuarter			
Control	2022-4	7512	67.675676	67.0
	2023-1	22808	101.368889	99.0
Pilot	2022-4	5714	60.147368	61.0
	2023-1	16725	101.981707	98.5

CONTROL VS. PILOT: HPP AND DTV



EXPLORING THE SPIKE

January-23 Pilot		
	HPP	DTV
count	61.000000	61.000000
mean	15.212787	90.311475
std	10.365996	29.587464
min	0.000000	3.000000
25%	8.000000	76.000000
50%	12.800000	85.000000
75%	21.250000	112.000000
max	45.000000	145.000000

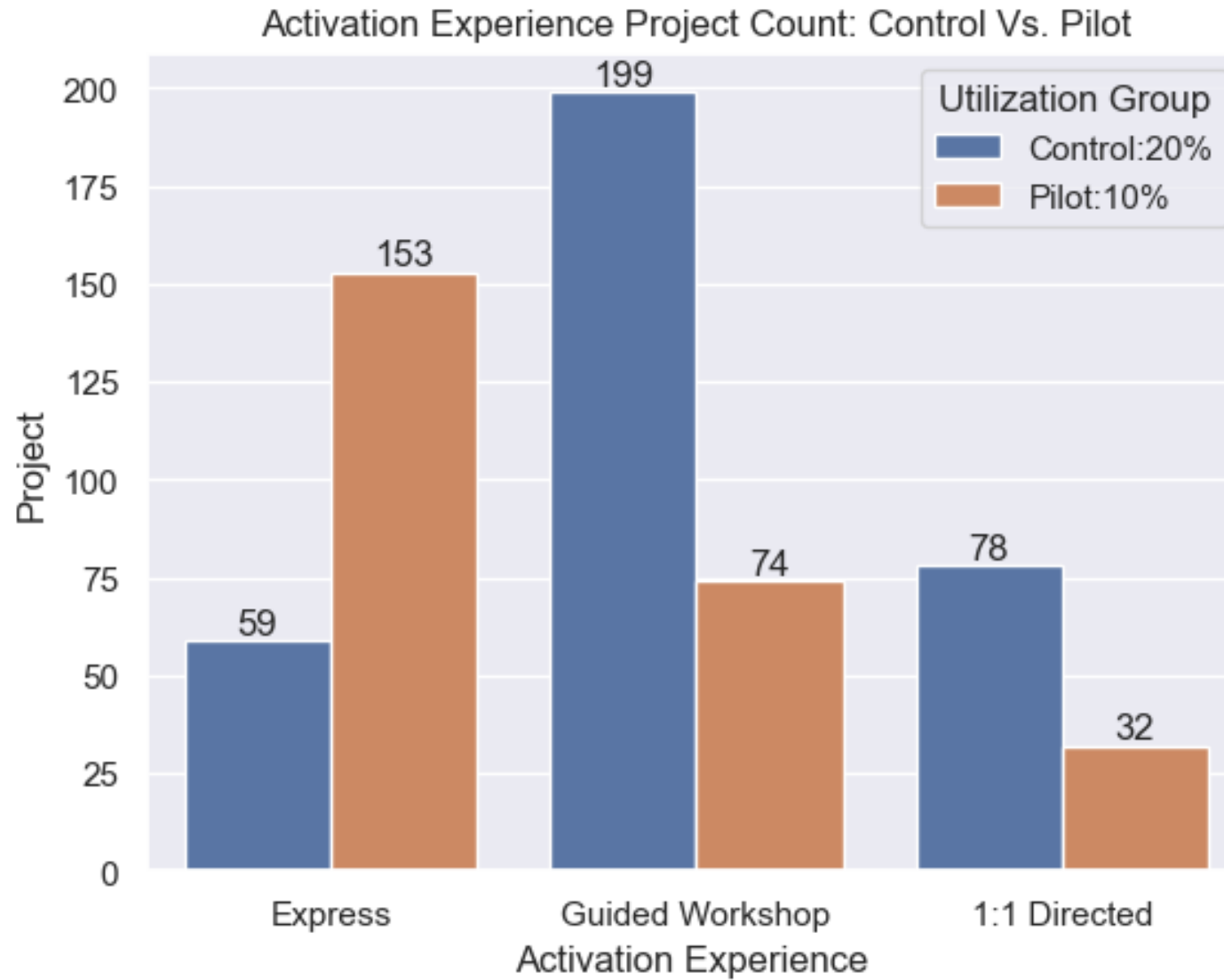
Feb-23 Pilot		
	HPP	DTV
count	78.000000	78.000000
mean	27.044744	109.089744
std	31.554358	35.375972
min	0.000000	18.000000
25%	9.937500	87.250000
50%	22.500000	109.000000
75%	32.375000	138.000000
max	172.200000	172.000000

Mar-23 Pilot		
	HPP	DTV
count	25.000000	25.000000
mean	17.750000	108.280000
std	19.116283	45.688729
min	0.000000	22.000000
25%	8.000000	89.000000
50%	11.750000	111.000000
75%	18.500000	137.000000
max	79.250000	187.000000

ACTIVATION COACH PRODUCTIVITY

		Q1_project_count	Q1_HPP_median	Q1_HPP_sum	Q1_HPP_mean	Q1_DTV_median	Q1_DTV_sum	Q1_DTV_mean
isPilot	ActivationCoach							
Pilot	Jenna Pingeon	9	0.000	9.00	1.000000	70.0	560	62.222222
	Denzel Alexander	8	26.750	208.00	26.000000	86.0	632	79.000000
	Josh Frandsen	8	24.750	156.00	19.500000	131.0	950	118.750000
	Austin Clary	7	9.000	80.00	11.428571	107.0	692	98.857143
	Diego Garcia	7	17.500	148.00	21.142857	112.0	803	114.714286
Control	Paul Walker	11	9.000	143.75	13.068182	63.0	892	81.090909
	Jessica Pearson	9	12.000	166.25	18.472222	119.0	1099	122.111111
	Danielle Hegge	7	6.000	60.00	8.571429	98.0	706	100.857143
	Lexis Julsrud-Wertjes	6	14.000	82.75	13.791667	109.0	641	106.833333
	Seth Bresky	6	11.750	70.50	11.750000	94.0	554	92.333333

ACTIVATION EXPERIENCE



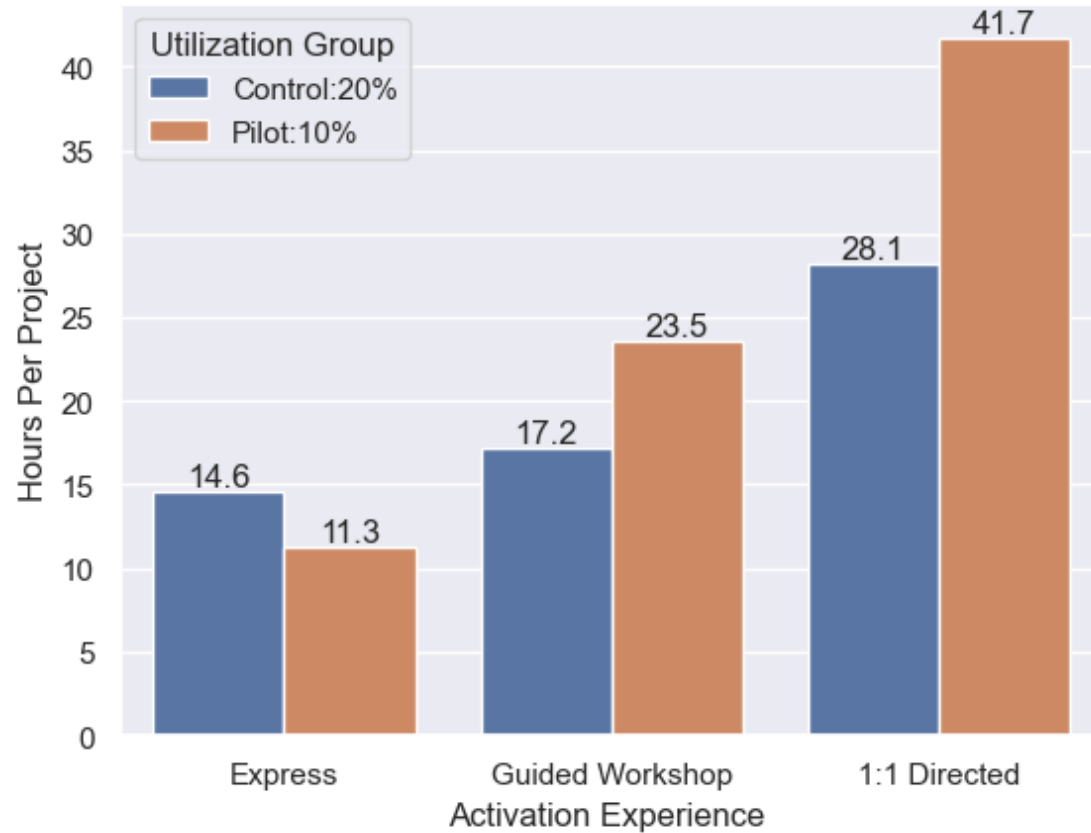
GROUPED ACTIVATION EXPERIENCE STATISTICS

		Q1_project_count	Q1_HPP_median	Q1_HPP_sum	Q1_HPP_mean	Q1_DTV_median	Q1_DTV_sum	Q1_DTV_mean
isPilot	ActivationExperience							
Pilot	Guided Workshop	56	22.500	1335.30	23.844643	98.5	5724	102.214286
	Express	83	9.750	980.80	11.816867	93.0	8091	97.481928
	1:1 Directed	25	34.250	1165.12	46.604800	128.0	2910	116.400000
Control	Guided Workshop	138	13.575	2394.14	17.348841	89.0	13458	97.521739
	Express	36	13.775	608.90	16.913889	103.0	3714	103.166667
	1:1 Directed	51	24.000	1455.31	28.535490	111.0	5636	110.509804

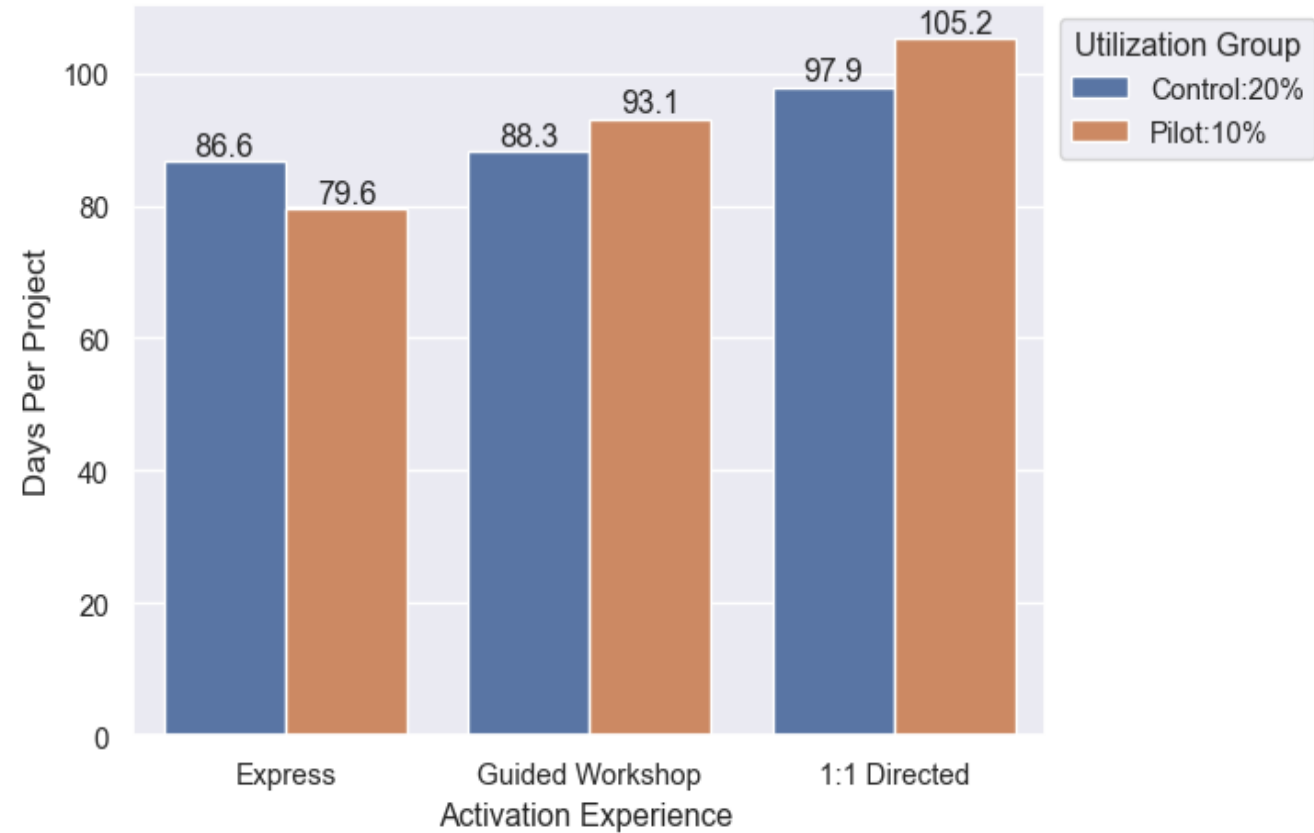
		Q4_project_count	Q4_HPP_median	Q4_HPP_sum	Q4_HPP_mean	Q4_DTV_median	Q4_DTV_sum	Q4_DTV_mean
isPilot	ActivationExperience							
Pilot	Guided Workshop	18	22.00	406.00	22.555556	63.5	1168	64.888889
	Express	70	8.25	744.25	10.632143	56.0	4089	58.414286
	1:1 Directed	7	22.25	168.25	24.035714	69.0	457	65.285714
Control	Guided Workshop	61	15.00	1019.41	16.711639	65.0	4113	67.426230
	Express	23	11.00	252.65	10.984783	51.0	1396	60.695652
	1:1 Directed	27	25.00	739.50	27.388889	81.0	2003	74.185185

ACTIVATION EXPERIENCE: HPP AND DTV

Activation Experience HPP: Control Vs. Pilot



Activation Experience DTV: Control Vs. Pilot



ACTIVATION EXPERIENCE: ACTIVATION COACH PRODUCTIVITY

		express_project_count	express_HPP_median	express_HPP_sum	express_HPP_mean	express_DTV_median	express_DTV_sum	express_DTV_mean
isPilot	ActivationCoach							
Pilot	Kristopher Horne	4.0	10.000	52.75	13.187500	61.0	395	56.428571
	Nicole Kolenic	4.0	17.500	65.50	16.375000	42.0	213	42.600000
	Austin Clary	3.0	11.000	35.00	11.666667	77.5	285	71.250000
	Charlene Bystrom	3.0	16.250	44.50	14.833333	85.0	261	87.000000

		guided_project_count	guided_HPP_median	guided_HPP_sum	guided_HPP_mean	guided_DTV_median	guided_DTV_sum	guided_DTV_mean
isPilot	ActivationCoach							
Pilot	Kristopher Horne	3.0	22.000	72.75	24.250000	61.0	395	56.428571
	Christine Bonvini	2.0	17.250	34.50	17.250000	57.0	114	57.000000
	Denzel Alexander	2.0	14.500	29.00	14.500000	50.0	100	50.000000
	Marlo Korbel	2.0	46.125	92.25	46.125000	82.0	164	82.000000

		oneonone_project_count	oneonone_HPP_median	oneonone_HPP_sum	oneonone_HPP_mean	oneonone_DTV_median	oneonone_DTV_sum	oneonone_DTV_mean
isPilot	ActivationCoach							
Pilot	Adam Haas	3.0	22.250	80.50	26.833333	69.0	183	61.000000
	Anna Christofaro	2.0	18.000	36.00	18.000000	61.5	247	61.750000
	Josh Frandsen	1.0	11.000	11.00	11.000000	69.0	191	63.666667
	Valerie Tema	1.0	40.750	40.75	40.750000	90.5	181	90.500000



THANK YOU

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<https://github.com/Jeri-Code>