

[ Assistant Researcher ]

# Data Analysis Work Sample

IT Data Analytics  
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# Overview

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1. Place : Applied Research Lab at NSCC
2. Leader : Alain Joseph (Director, Applied Research)
3. Duration : July 2019 ~ March 2020
4. Total working time : 386hrs
5. Role : Analyzing data, documentation, reporting

## Funding Analysis

# CCI FUNDING ANALYSIS

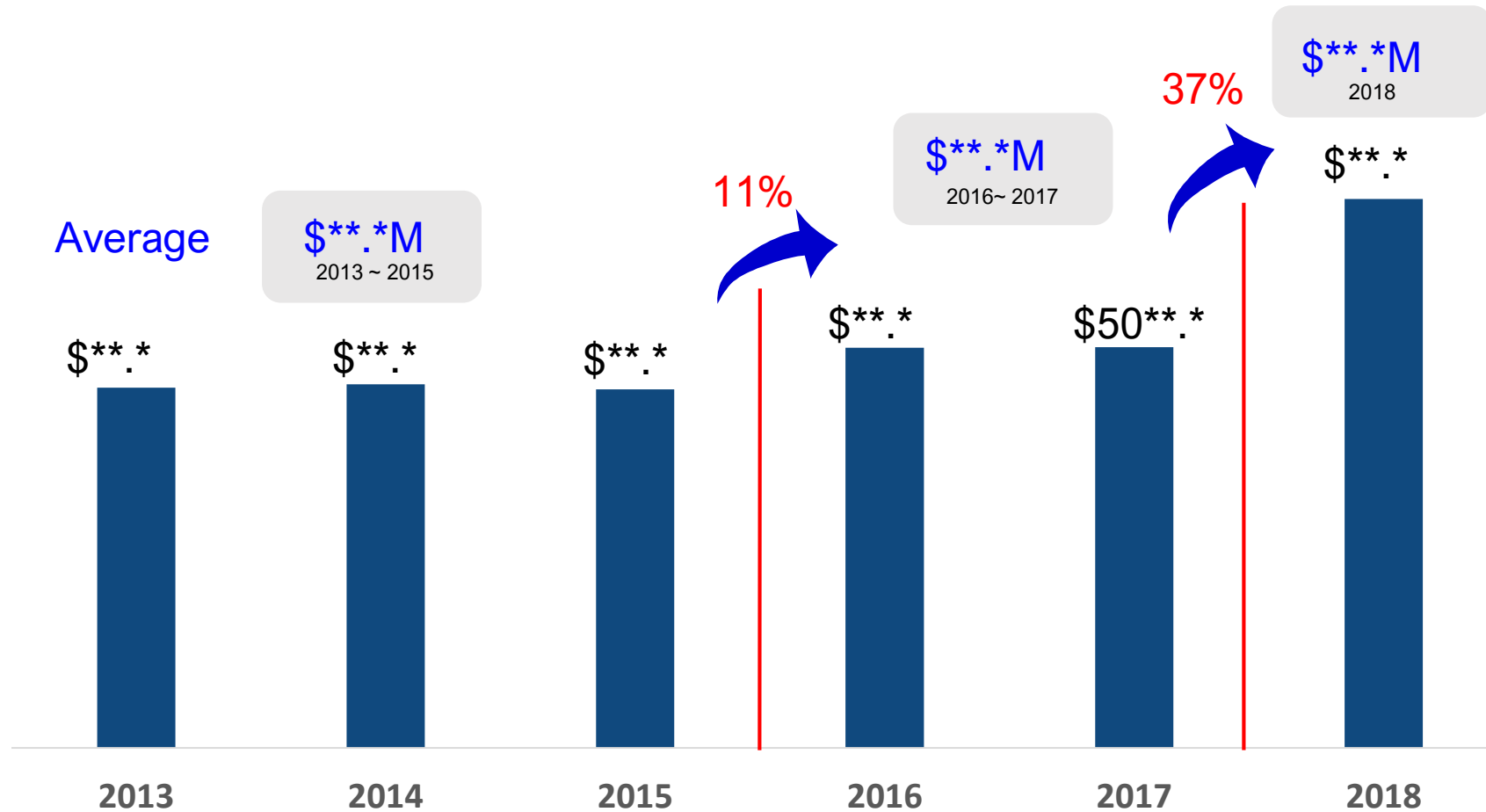
# OVERVIEW

## OVERVIEW: Total Program Funding

**\$\*\*\*,\*\*\***

Total Funding 2013-2018

# OVERVIEW: Annual Funding Distribution

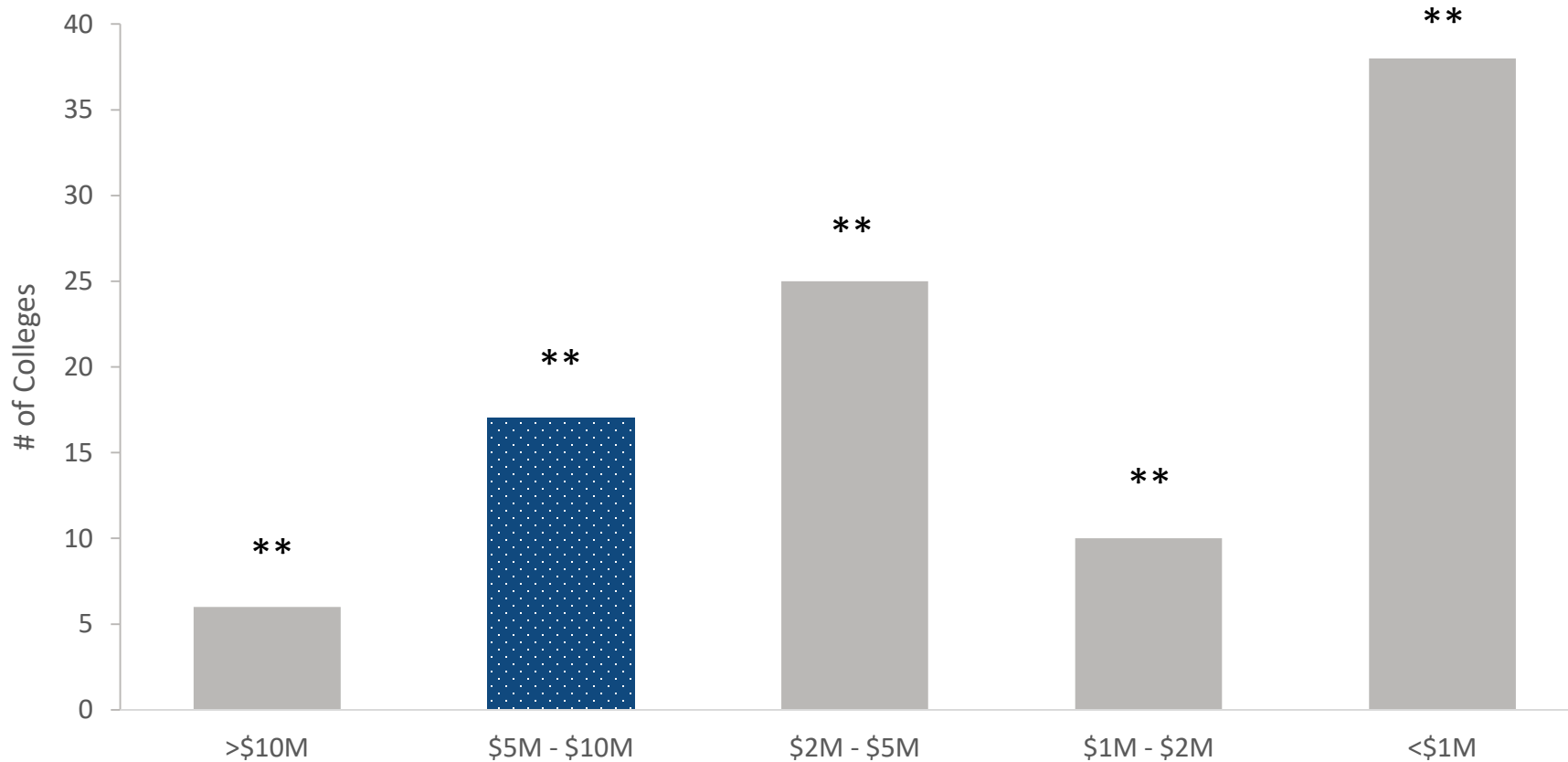




## OVERVIEW: Total College Participation

	2013	2014	2015	2016	2017	2018
Colleges Receiving <=\$0						
Colleges Receiving >\$0						
Total Eligible Colleges						
Annual Funding						
Total Average						
Effective Average						
Difference						

## OVERVIEW: Total Distribution by Award Size



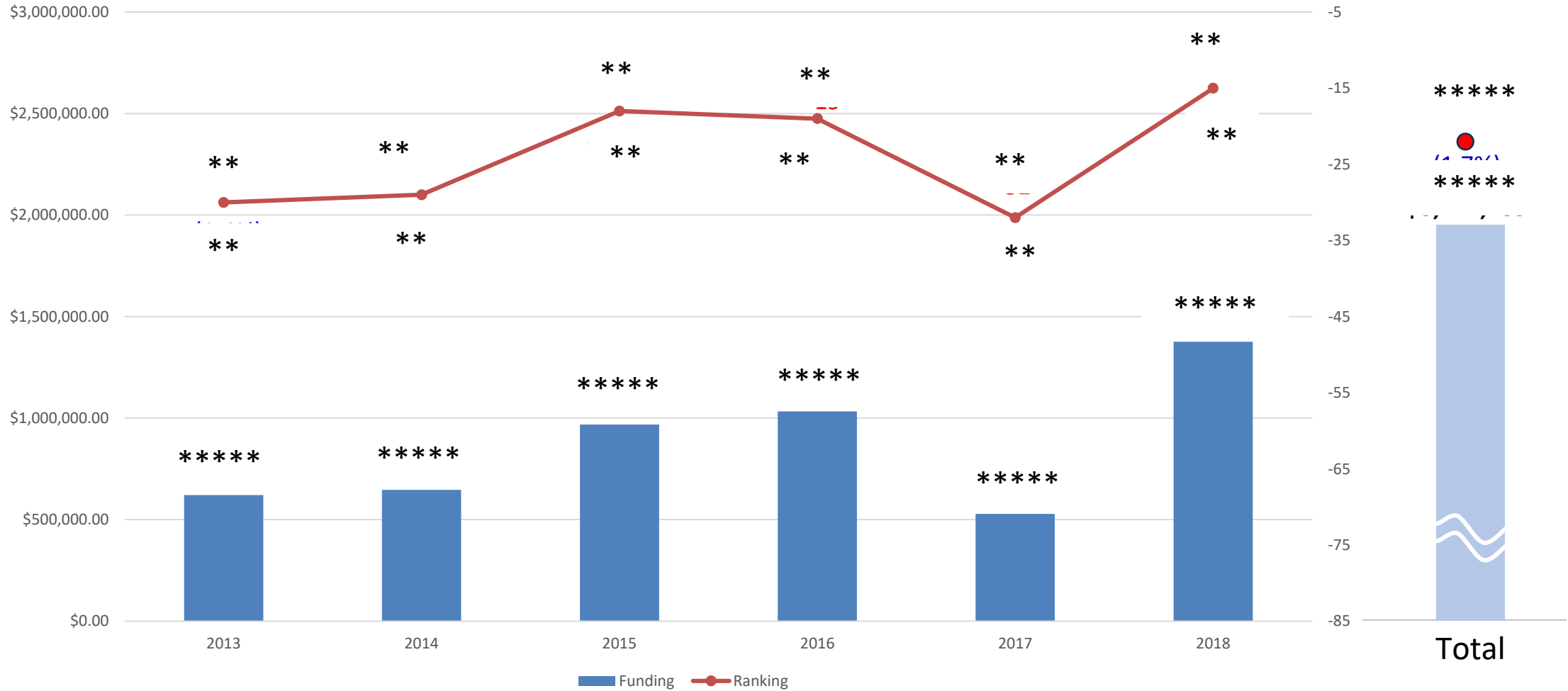
## NSCC DEEP DIVE

## NSCC: Total Funding Awarded

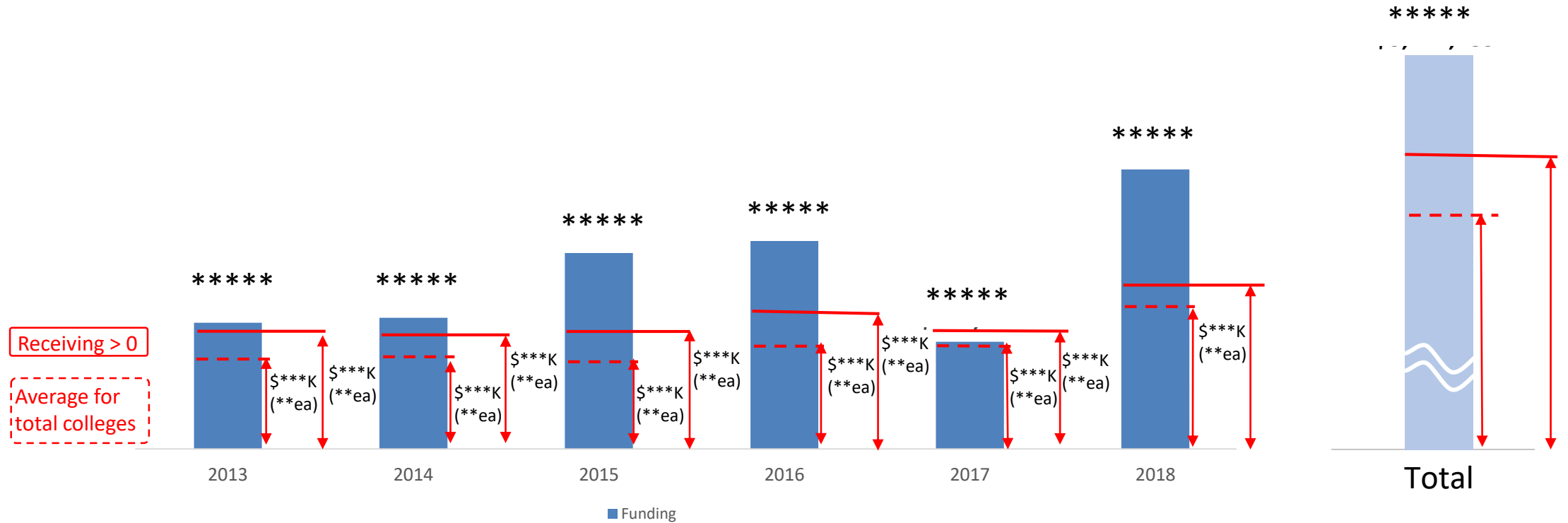
\$\* , \*\*\* , \*\*\* \*\*

Total Funding 2013-2018

# NSCC: Annual Funding Distribution

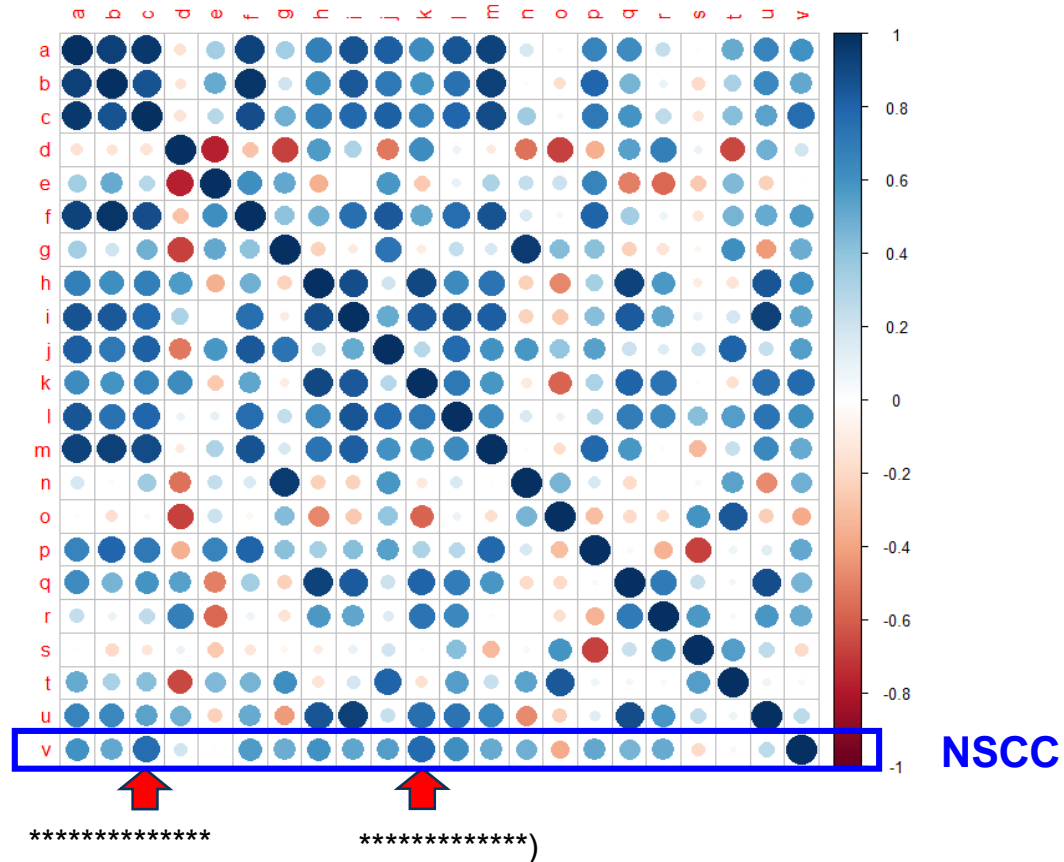


# NSCC: Effective Average & Total Average



# NSCC: Correlation Analysis

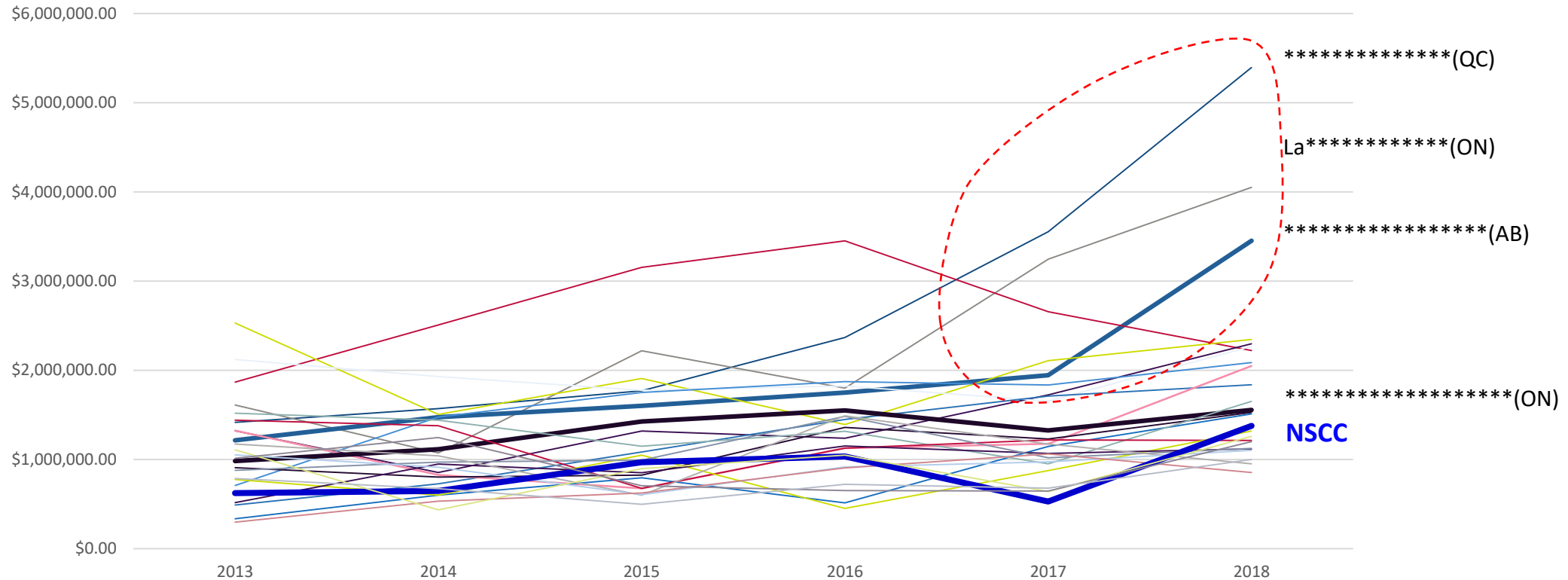
[ Correlation Coefficient ]



**NSCC** v

a	0.60210984	
b	0.51309623	
c	0.76441997	*****
d	0.19720918	
e	0.01137147	
f	0.56639867	
g	0.49915096	
h	0.60279388	
i	0.52619032	
j	0.55020763	
k	0.77969369	*****
l	0.61165026	
m	0.50140096	
n	0.48538971	
o	-0.37391145	
p	0.51022668	
q	0.46157677	
r	0.50700928	
s	-0.19322319	
t	0.04729895	
u	0.26299471	
v	1.00000000	

# NSCC: Top 25 Colleges



- Cégep de Trois-Rivières
- Southern Alberta Inst of Technology
- Collège d'Alma
- Collège de Maisonneuve
- Cégep de Saint-Jérôme
- College of New Caledonia
- Cégep de Rimouski
- Lambton College
- Red River College
- Sheridan College
- Collège Shawinigan
- Niagara College Canada
- Nova Scotia Community College
- Northern Alberta Inst. of Technology
- Cégep de Thetford
- George Brown College
- Cégep de La Pocatière
- Centennial College
- Mohawk College
- Cégep de Saint-Hyacinthe
- Cégep Édouard-Montpetit
- Cégep de la Gaspésie et des Îles
- Cégep de Victoriaville
- Institut de technologie agroalimentaire
- Fleming College



## PROVINCIAL COMPARISON

## PROVINCIAL: Total Disbursement

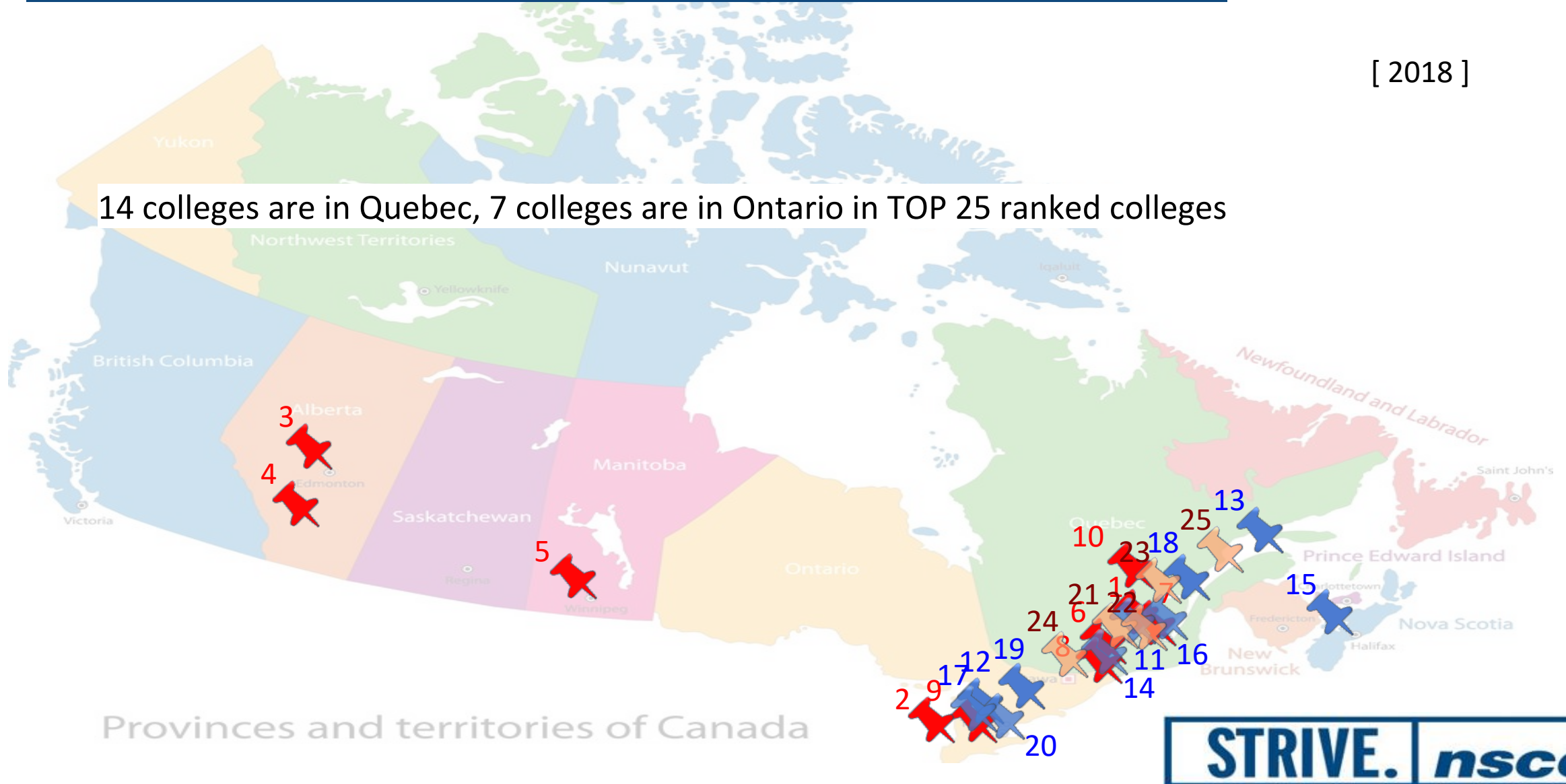
Prov	Funding(2018)	Number of college		Per college			
		Total	Effective	Total	Ranking	Effective	Ranking
QC					4		4
ON					6		5
AB					3		3
BC					10		10
MT					2		1
NS					1		2
PE					5		6
NB					9		7
NT					7		8
YT					8		9
SK					12		11
NL					11		12

\* Data for 96 colleges(which were received funding from CCI) in 2018

# PROVINCIAL: Top 25 Colleges

[ 2018 ]

14 colleges are in Quebec, 7 colleges are in Ontario in TOP 25 ranked colleges



# PROVINCIAL: Annual Funding per Student

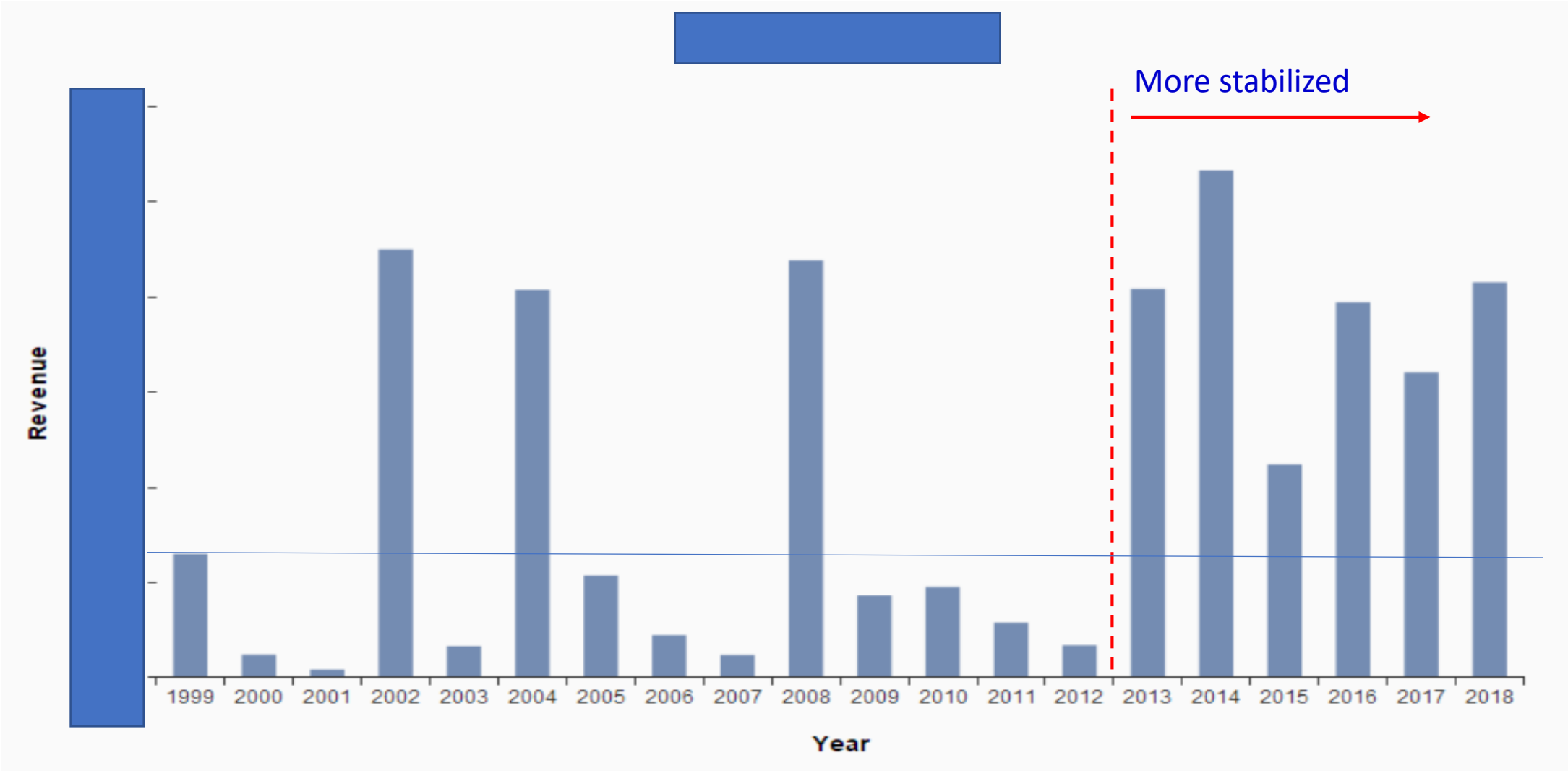
State	2013			2014			2015			2016		
	Students	Funding	per student	Students	Funding	per student	Students	Funding	per student	Students	Funding	per student
QC												
ON												
AB												
BC												
MT												
NS												
PE												
NB												
NT												
SK												
NL												

# Applied Research History

# Applied Research History

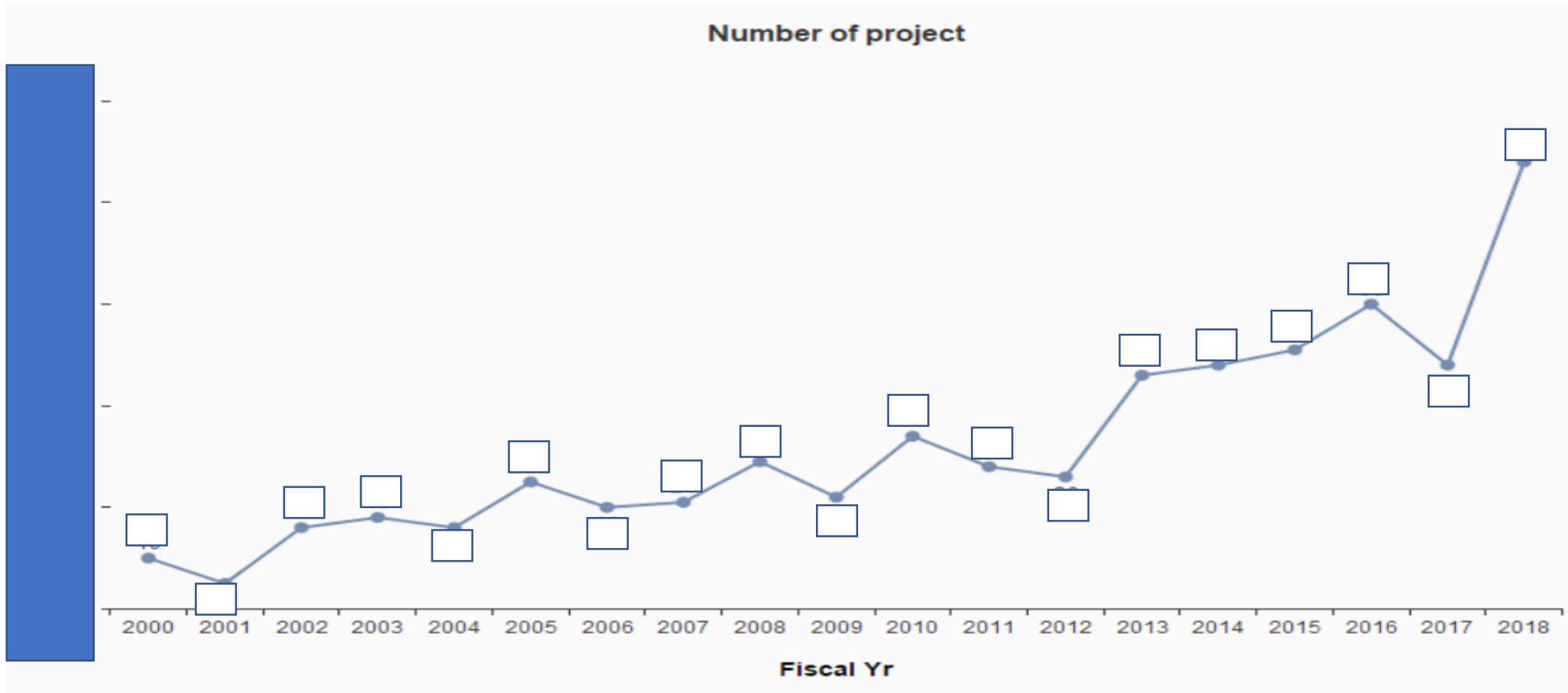
# Revenue

\_ \*\*\*\*\*88



# Number of Projects

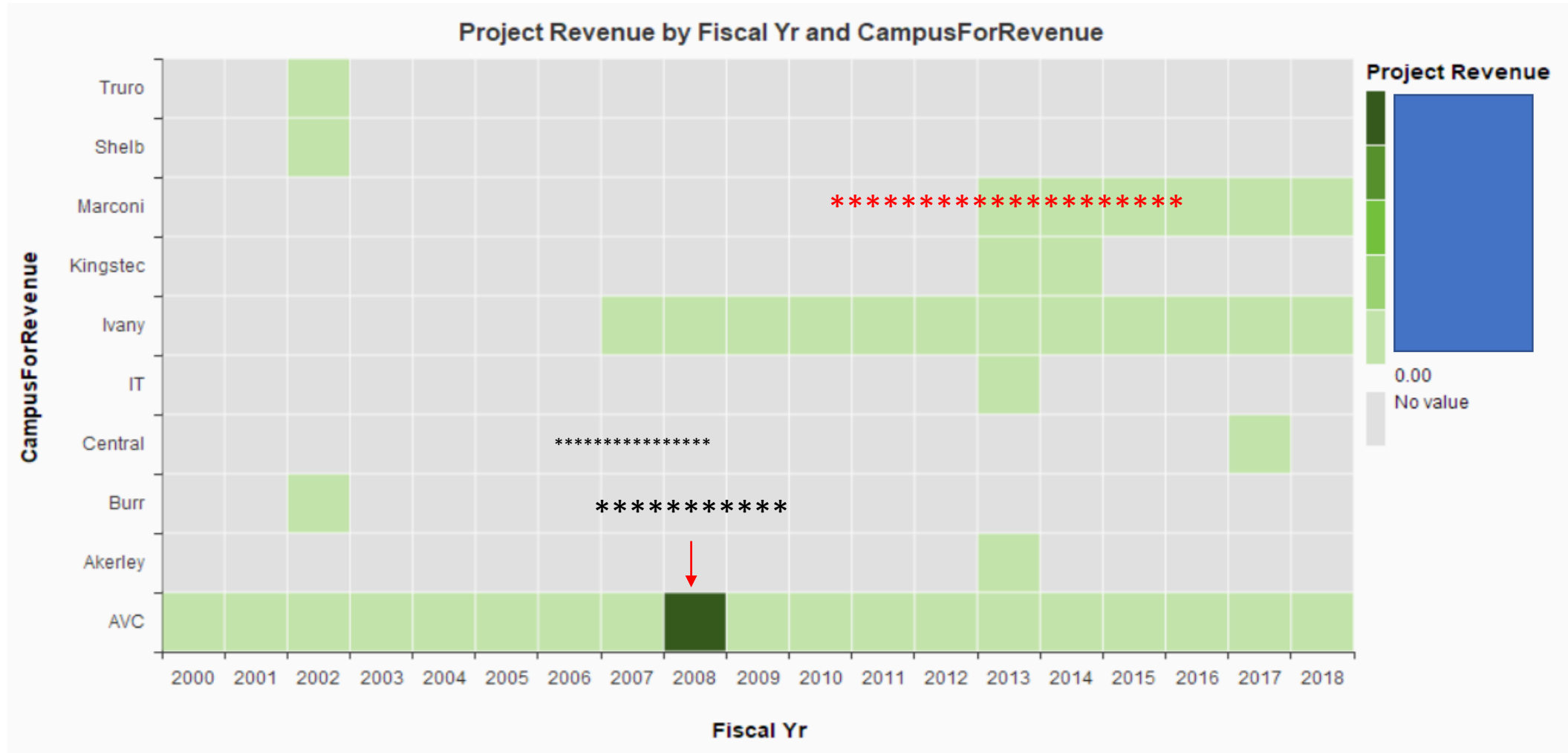
- As similar as revenue, number of project is increasing since 2013
- Especially in 2018, we has the most projects





# Revenue in campus

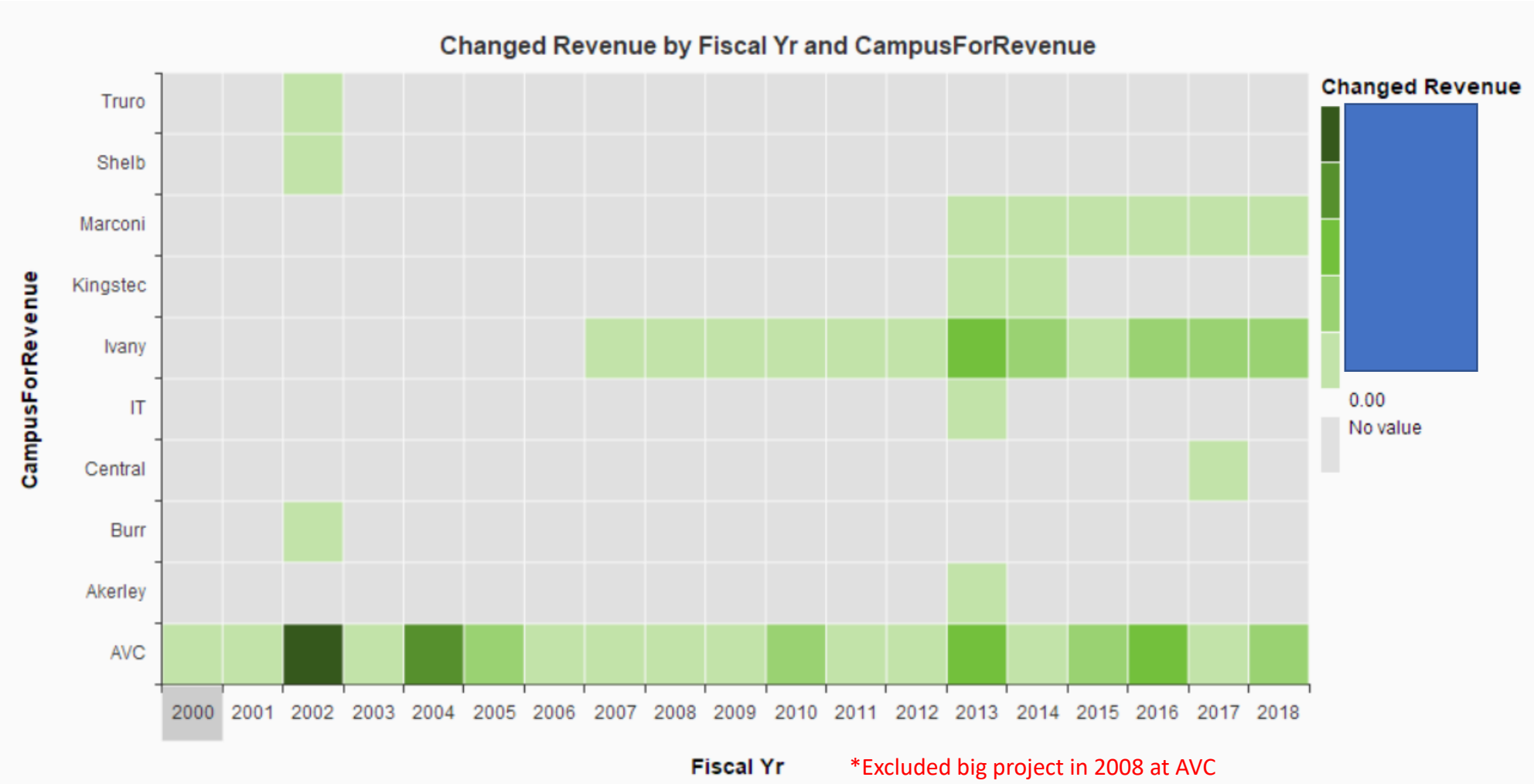
\*\*\*\*\*



\* This is an amount of funding we got per year / If there are more than 2 campuses, I divided revenue by number of campuses

# Revenue per campus

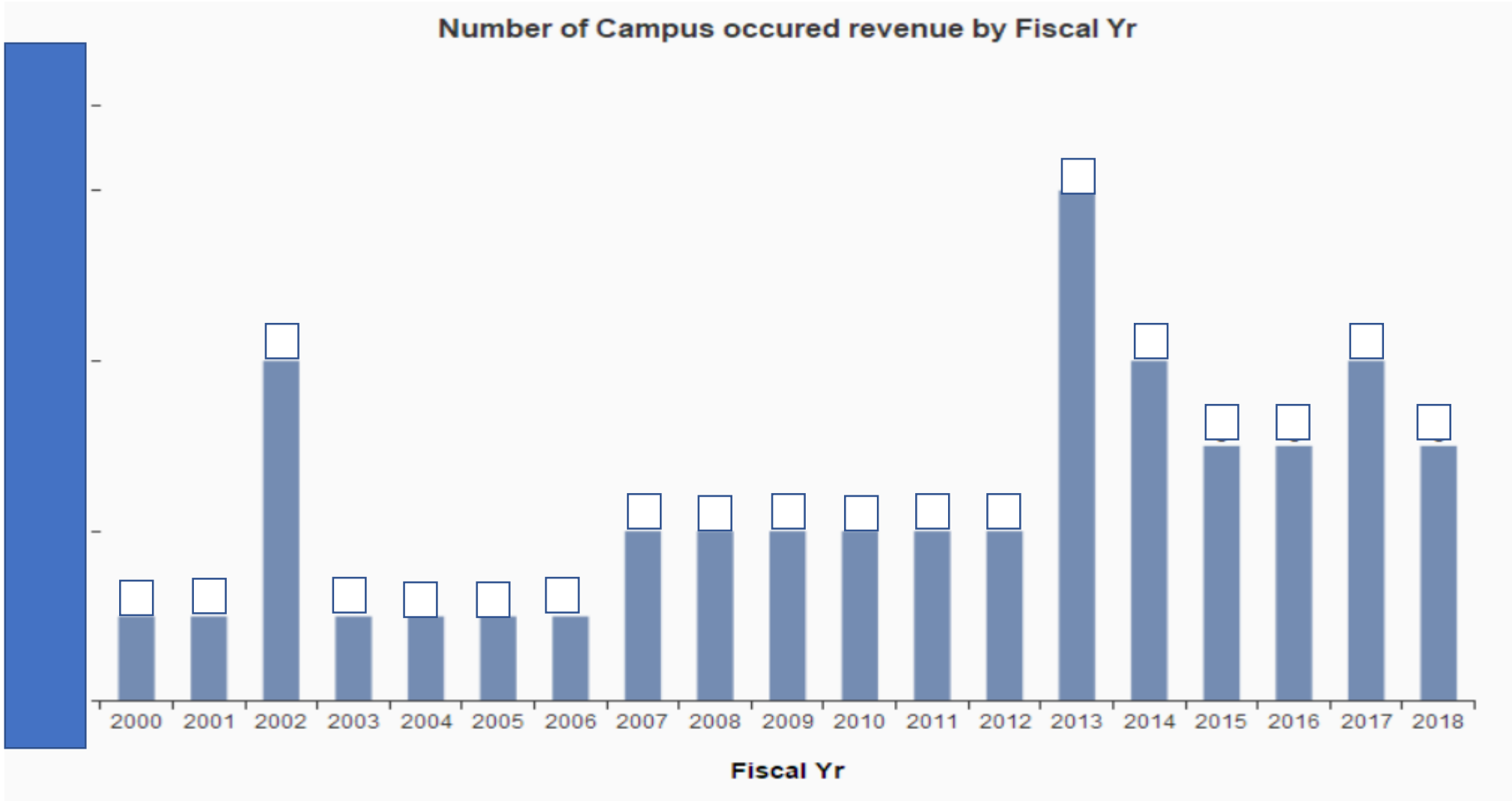
\_ \*\*\*\*\*



\* This is an amount of funding we got per year / If there are more than 2 campuses, I divided revenue by number of campuses

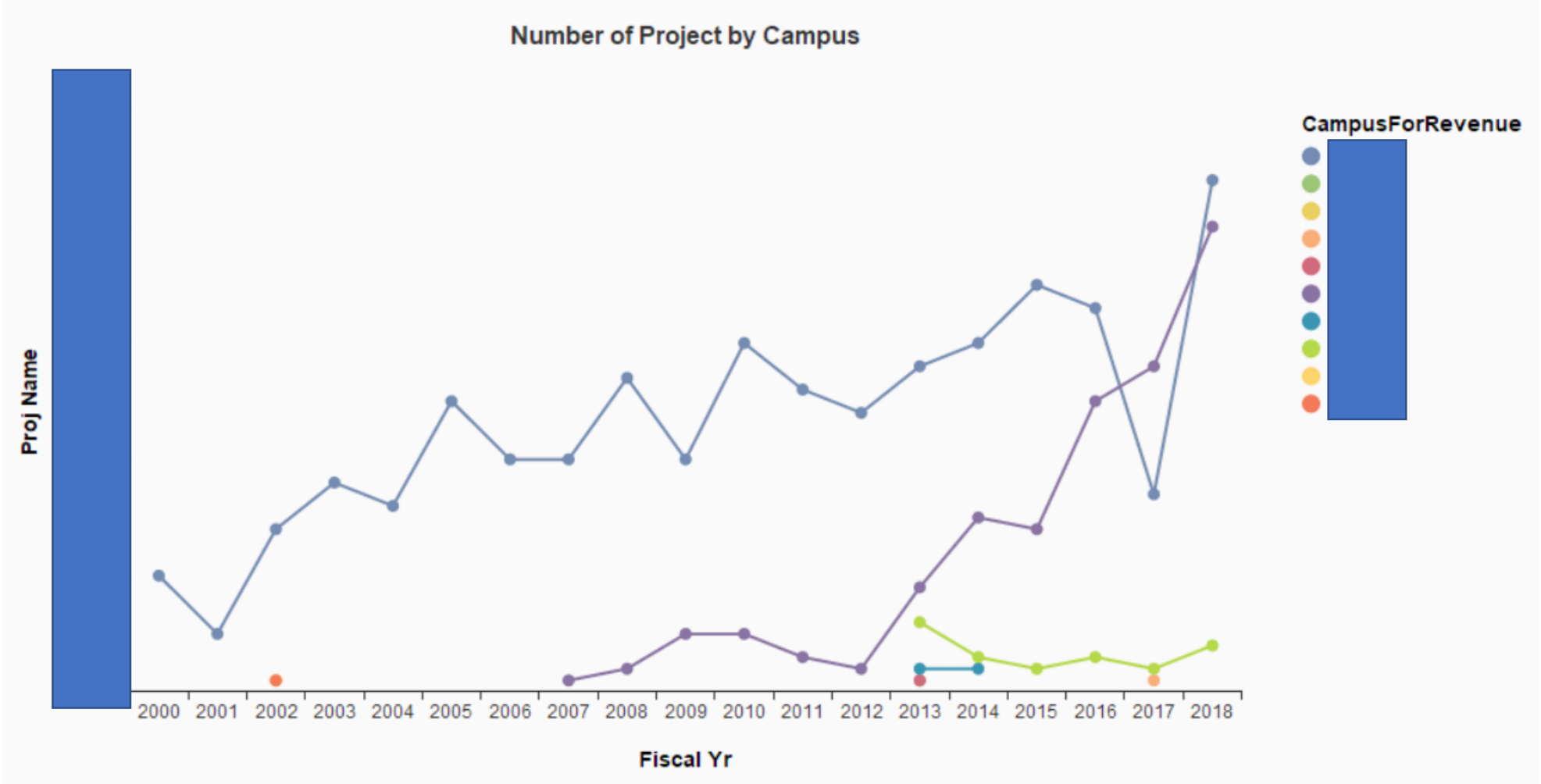
# Number of Campus occurred revenue

- We are occurring revenue in various location



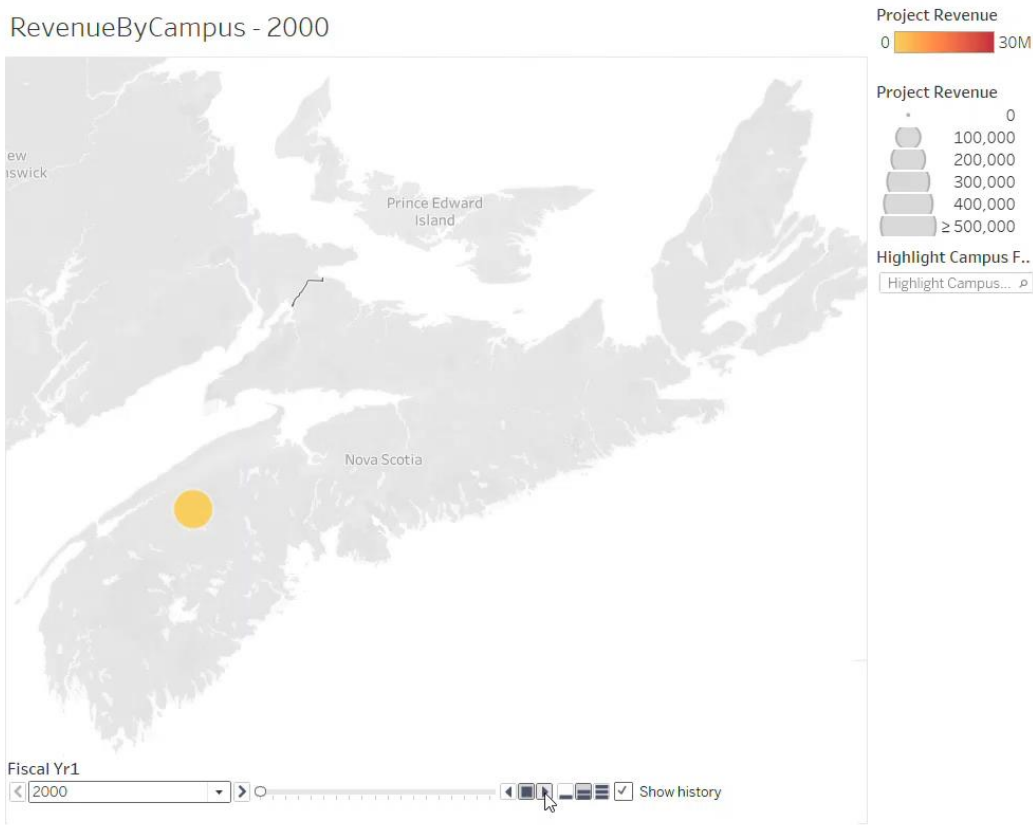
# Number of project per campus

\_ \*\*\*\*\*



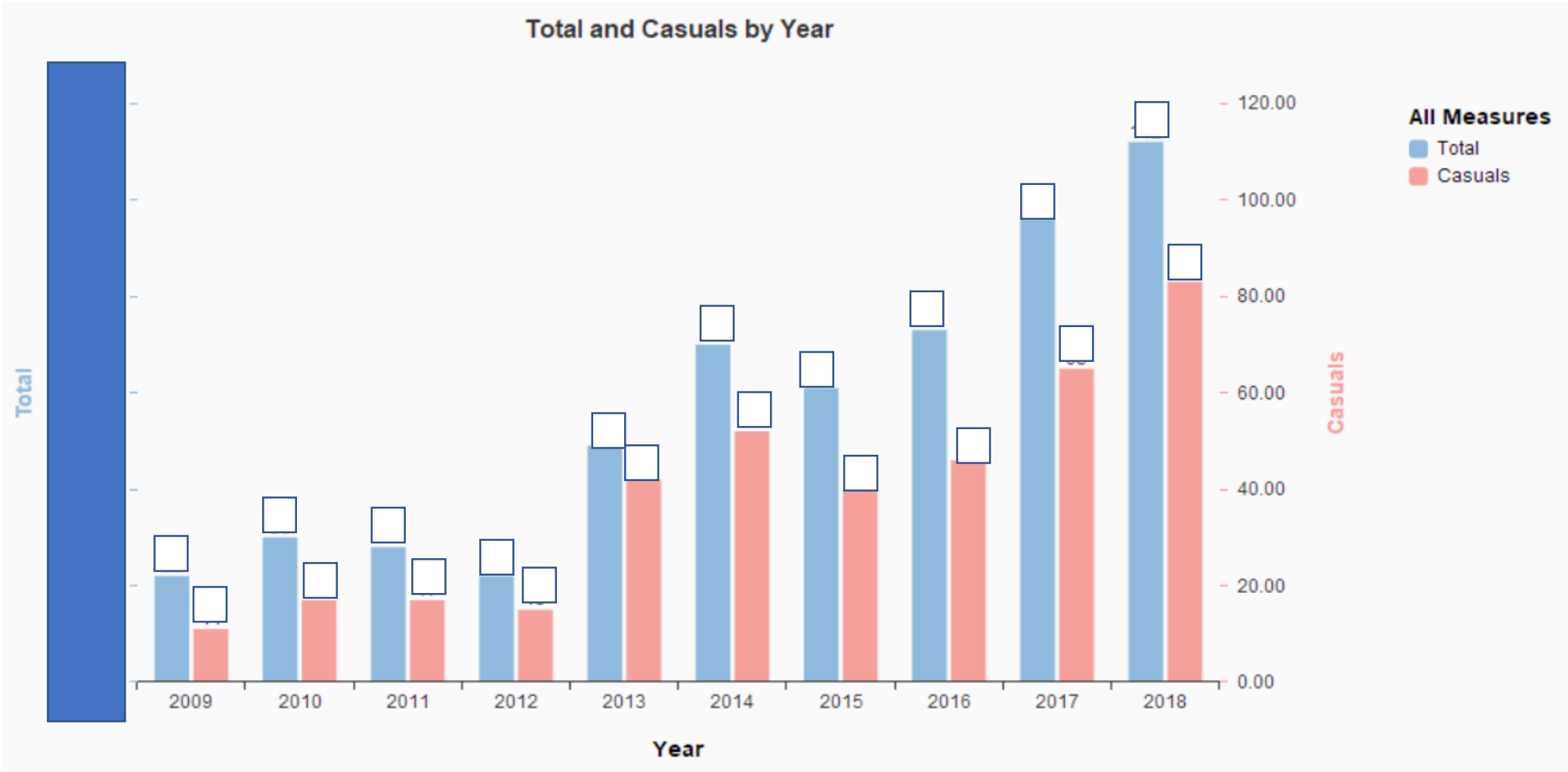
# Revenue per campus in time series

I tried to see the differences in time series. (This is video, you can click)  
I am not sure this could be okay or not



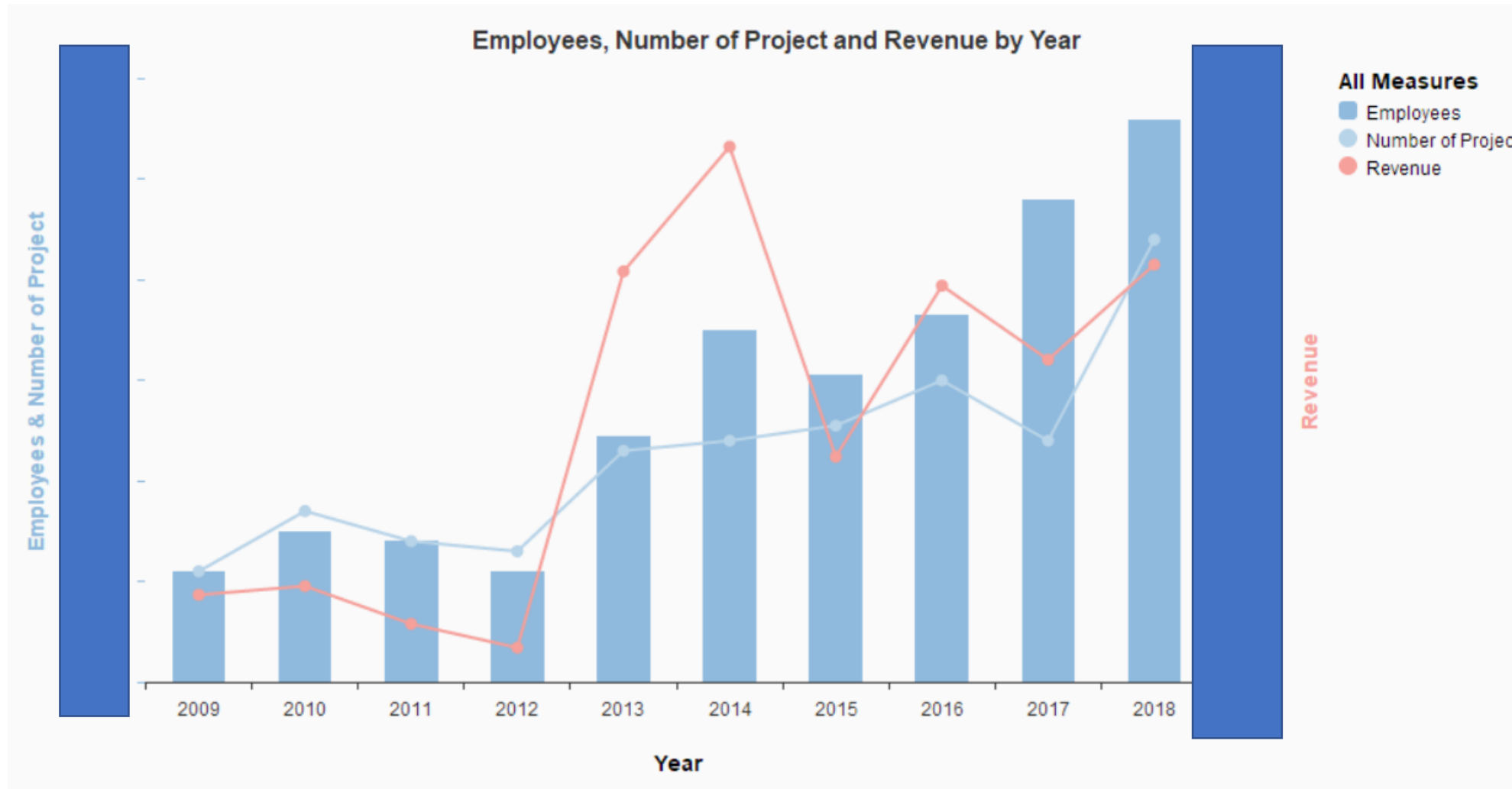
# Employees

\_ \*\*\*\*\*



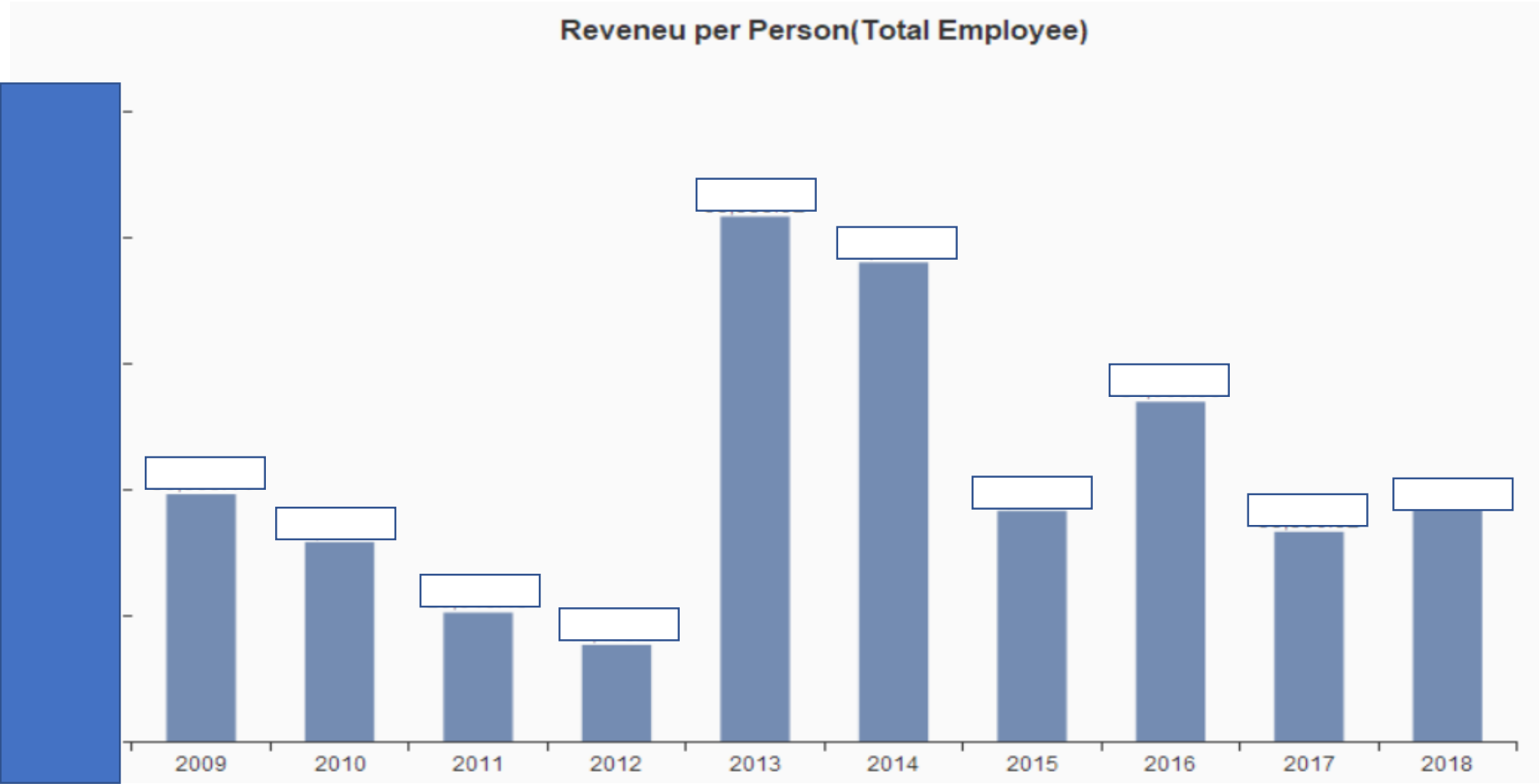
# Trend of Revenue, number of PJT, employees

- Revenue, number of project, employees has similar trend



# Revenue/Number of PJTs per Person

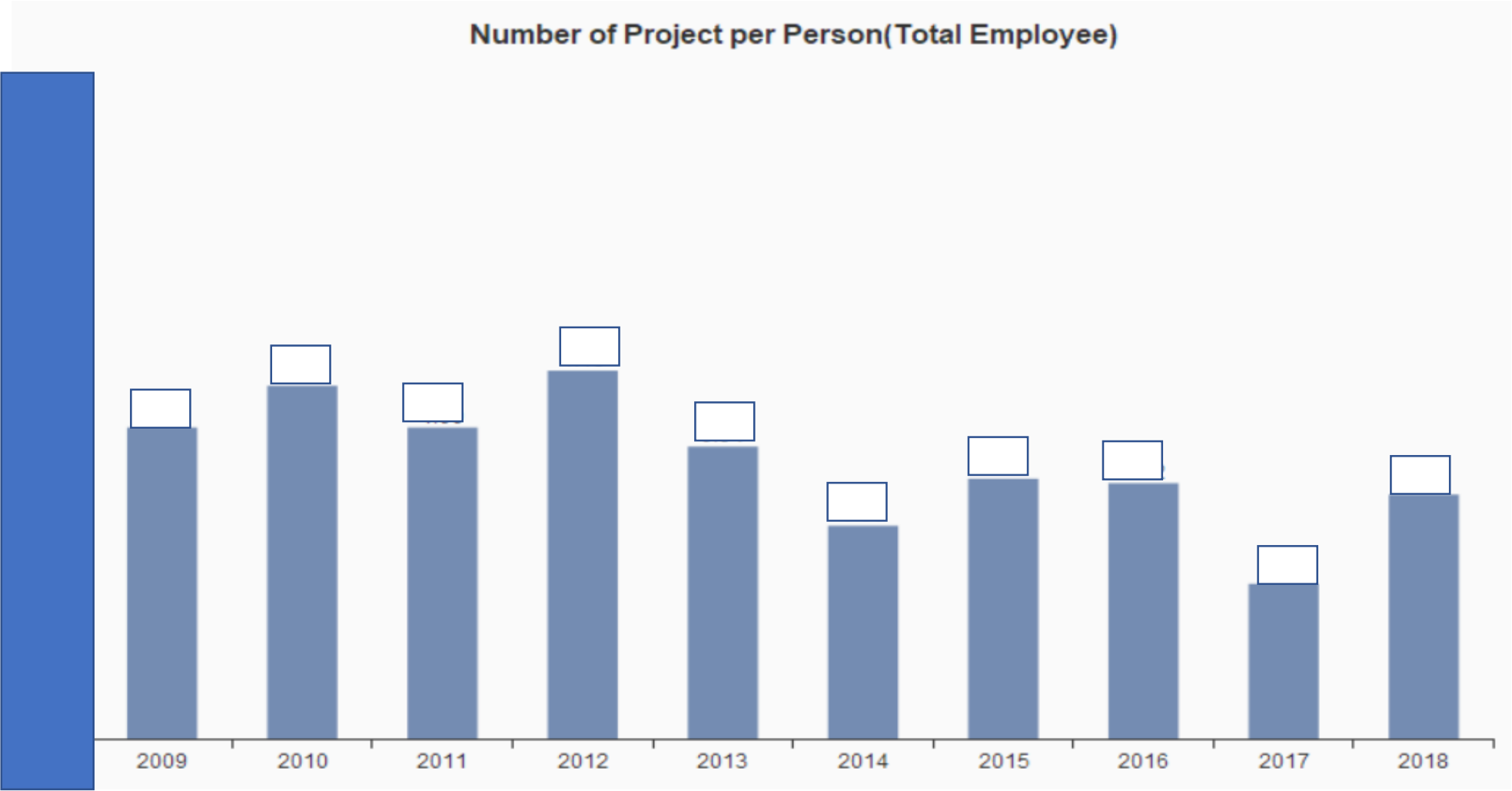
Revenue / Total number of employees





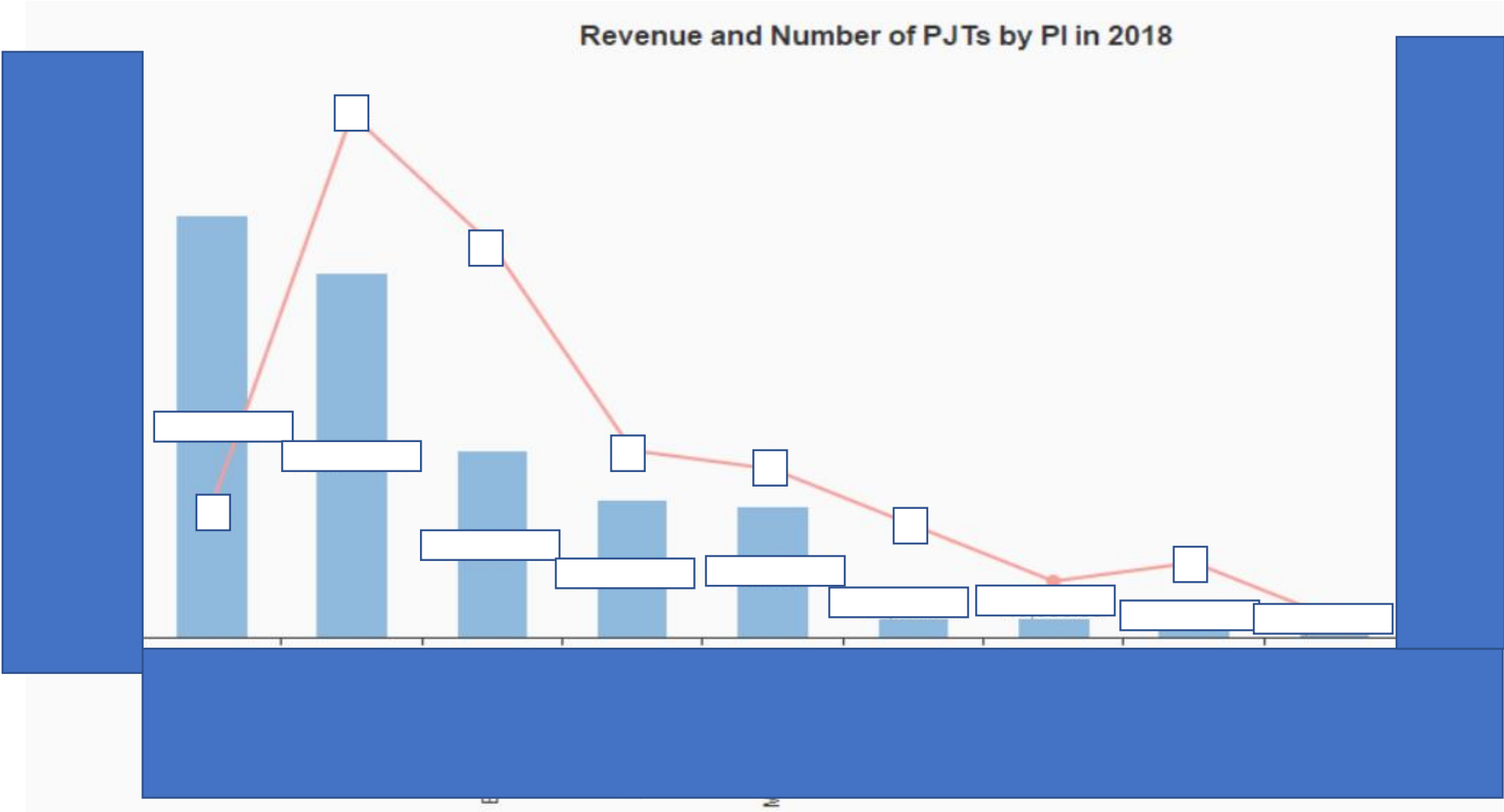
# Revenue/Number of PJTs per Person

Number of Projects / Total number of employees



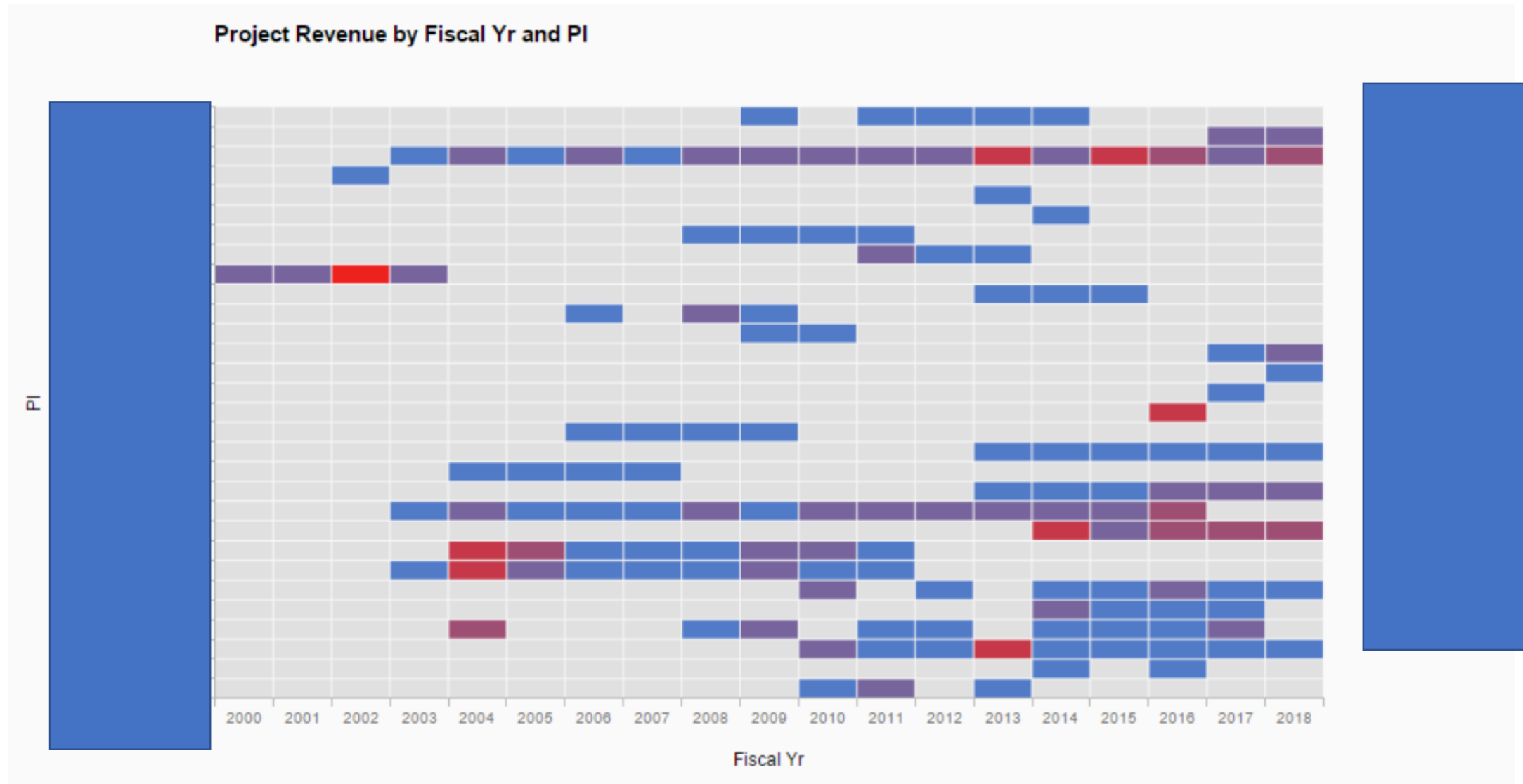
# Revenue and Number of PJTs per PI in 2018

- \*\*\*\*\* has the biggest revenue and \*\*\* has the biggest number of projects

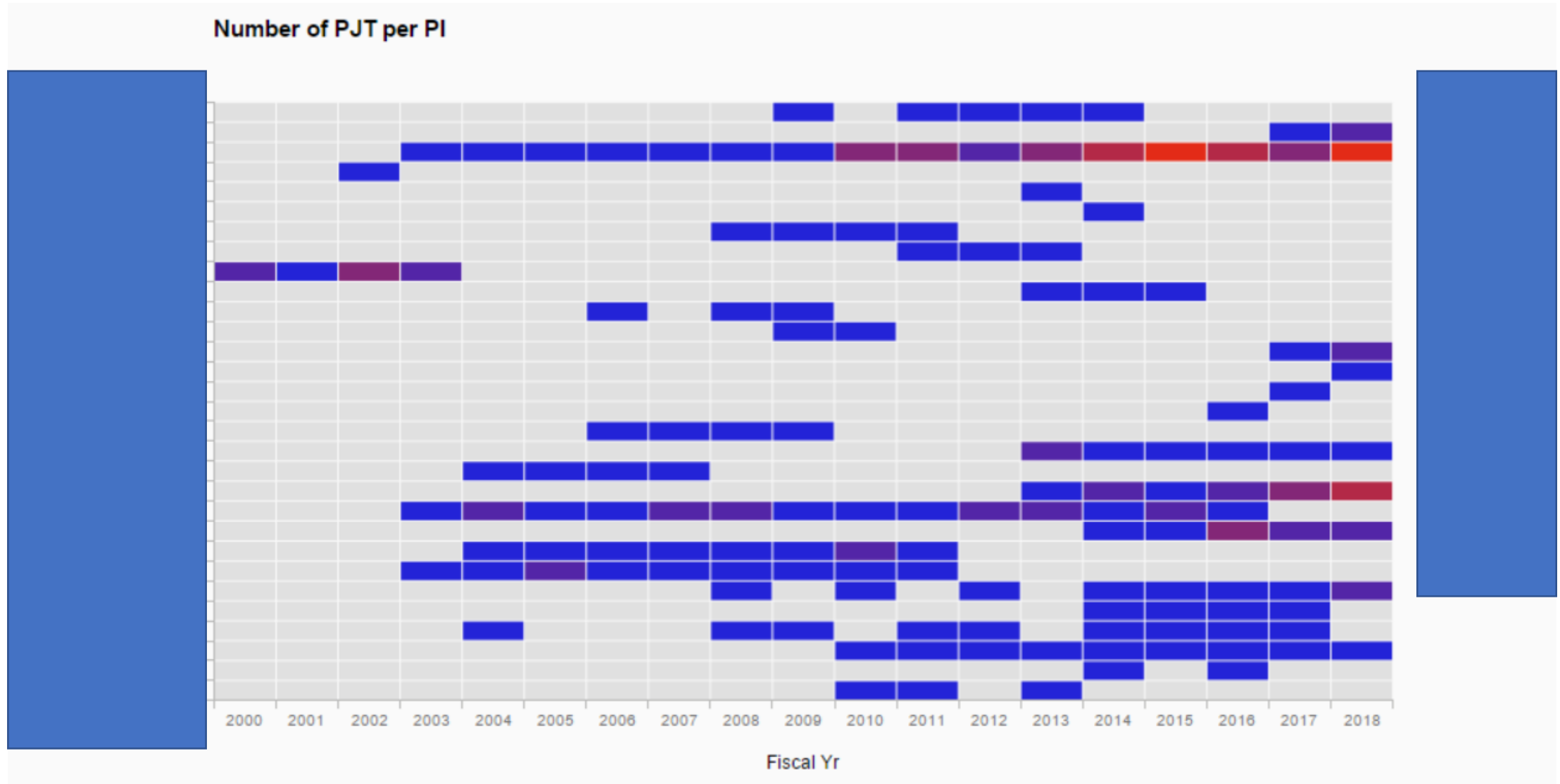


\* If there are more than 2 PI, I divided revenue by number of PI

# Revenue per PI



## Number of PJT per PI



Thank you