## Welcome to STB's MICE Industry Toolkit For Venues and events organizers

Version: November 2021





#### INTRODUCTION

MICE sector in Covid-19 world

Singapore and the future of events

Re-defining lead generation

HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide



As the MICE industry is largely driven by crowds gathering, the recent COVID-19 restrictions made a massive impact on the entire sector. This monumental shift has forced the industry to rethink its business model and adapt a new hybrid models to run events.

#### Main challenges 2021



Ongoing Covid-19 restrictions and low willingness to pay for hybrid events

Exhibitors and attendees are less willing to pay for hybrid events as these events lack same levels of physical engagement and perceived to cost less to hold



Need to invest in digital infrastructure to monetize hybrid events

Offering exceptional hybrid experience is critical to drive sponsors and exhibitors sales conversion. However, most events organiser are not fully equipped yet

#### Limited ability to identify potential exhibitors

Venues and events organisers are trying to drive business growth by tapping into new markets and industries. With limited on-ground interactions and ongoing travel restrictions, sales teams are spending more time conducting online research as a primary source for lead generation.





3



## Ready, set, go!

#### INTRODUCTION

MICE sector in Covid-19 world

Singapore and the future of events

▶ Re-defining lead generation

HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide



## Adapting and embracing change in the normal

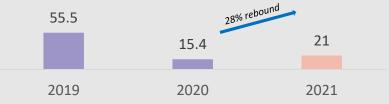
According to a survey of nearly 400 exhibit and event managers done by the American Best Practices Media Organisation, the average corporate budgets for event exhibition and sponsorship in 2020 has fallen drastically, signalling that weakness in the market from the pandemic will continue this year.

However, a recovery is projected as companies look to exhibit and sponsor at far more events in 2021. Event and venue operators who are able to capitalise on this recovery by capturing the renewed event interest of corporates would be well positioned to grow and capture market share. As such, focus on effective lead generation and conversion is of paramount importance.

Moreover, hybrid events has been key in allowing events organisers to continue with business operations and to host larger events in terms of number of participants. As such, those who are able to identify new targets effectively and run hybrid events are the winners in the longer run.

#### Economic Outlook Survey

How many events or trade shows will your company exhibit at or sponsor in 2021?



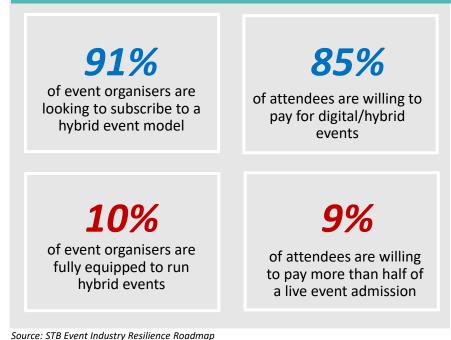
From EXHIBITOR's 2021 Economic Outlook Survey

S Back

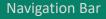
In Singapore, the MICE industry was heavily impacted by the pandemic made it impossible to organise and host large events. As a result, forward-thinking event and venue stakeholders have embraced the hybrid event model to adapt to the new normal.

This shift increased the complexity of event orchestration and data management as event engagement moves to a multiplatform paradigm. While new datasets are generated, only 10% are fully equipped to manage and capitalise on this change.

#### STB Industry Survey



Next >



#### INTRODUCTION

- MICE sector in Covid-19 world
- Singapore and the future of events

• Re-defining lead generation

#### HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide

## Lead generation, traditionally a manual and time consuming task

New hybrid models resulted in events with far greater build up in the pre-event stage. Sales teams, now more than ever, need to invest more time on identifying new targets that could participate in events virtually, a **manual process of research even before they begin with lead conversion.** 

#### What is the current process of lead generation?

- Traditionally **done manually online** on search browsers (e.g. Google, Bing) which provides search results based on multiple attributes such as indexed content and click-through rate, forming **rudimentary and generic forms of searches**
- Repetitive and generic results sales personnel typically conduct secondary searches to identify potential customers

#### What are the issues?

- Not optimised for the events organisers and sales personnel often flooded with results that has limited business impact (e.g. marketing articles)
- Sales units also need to manually screen for key information and conduct due diligence to be able to form credible leads, thus consuming even more of their time

#### **STB Industry Survey**

A significant amount of resources is spent on this process:



of sales team's time spent on manual lead generation during a typical event cycle (equivalent to 2 out of 5 days)

Lead generation today is as tricky as ever, even with an increased amount of data and information readily available online. Without automated means of managing and working with such data sets, more data can easily be overwhelming rather than enlightening.







**Navigation Bar** 

#### INTRODUCTION

- MICE sector in Covid-19 world
- Singapore and the future of events

Re-defining lead generation

#### HOW TO GUIDE

- Introduction to the industry POC
- Step-by-step guide

### Natural language processing (NLP) NLP, a Data driven approach to accelerate lead generation

NLP stands for Natural Language Processing, is a form of machine learning (ML) that extracts meaning from human language to make decisions. In this process:

- Words are assigned vector values allows the algorithm to better understand the significance of each word in each sentence
- NLP models use ML to iteratively improve the values assigned to each word from huge data dumps based on its relevance for users

#### What are the key benefits?

Accelerate lead generation time by reducing false positive

Reducing time spent on search in terms of manual key 2 word entry and reading through multiple news sources

Ability to conduct pin-point searches based on pre-3 defined criteria for the specific lead generation



improvement in search results

(equivalent to identifying 166 relevant search articles from 1,388 articles)





1



## Ready, set, go!

#### INTRODUCTION

MICE sector in Covid-19 world

• Singapore and the future of events

▶ Re-defining lead generation

#### HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide

#### Summary

Concept

#### Industry Use Case

#### Problem statement

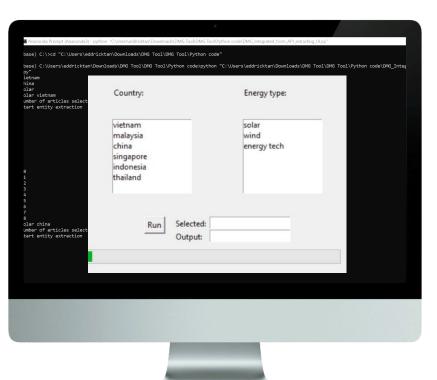
How might an event organiser leverage on NLP to identify new leads in new geographies more effectively?

#### Objectives

- Enable sales personnel to save time in identifying new targets through online secondary research
- Ability to modify and customize the search logic independently and based on the business needs

#### **Key Benefits**

- Reduce amount of time spent on targeting new leads, based on up-to-date information and past successfully converted leads
- Be able to easily keep up to date with key industry news to ensure that sales personnel are targeting the right customer with relevant content
- Project probability of conversion of leads, allowing for better estimation of resources and time allocated to conversion









## Ready, set, go!

#### INTRODUCTION

MICE sector in Covid-19 world

Singapore and the future of events

Re-defining lead generation

#### **HOW TO GUIDE**

Introduction to the industry POC

#### Step-by-step guide

**Singapore** TOURISM BOARD



#### Summary

Concept

#### Industry Use Case

The extraction and consolidation of key information like project names, details of company involved, name of the decision maker, monetary information, news date, etc., from the news articles published daily through NLP-NER algorithm would benefit event organizer to identify new leads in unfamiliar markets.

Click here to watch NPL use case video tutorial

Save 💷 🗒 ৺ - 🖇 - =	DMG_interested_entities - Excel		Search	1000			1		Guddala Kumaran J	raveenkumar (SG/Advis	ev) CC	m -	- 01
Home Insert Draw Page L	ayout Formulas Data Review View Develope	Help KPMG									2	Share	Comm
X Cut Calibri	11 - A A = = =	General ~		Normal	Bad	Good	Neutral			∑ AutoSum ~ A	0 9		1.58
Calibri -	11 - A A - = = v sp Wrap lext	General ~	<b>IIII</b> 1	Normai	840	6000	Neutrai			Z Fill - Z	v p	7	101
S Format Painter B I U + H +	0.A. EEE 02												
		POC 11: A o	ne-stop to	ol to extract p	otential e	entities fron	n news fee	eds for	better prosp	ecting purpos	2		
Clipboard Fa Font	Ts Aligner									0			
ECURITY WARNING Some active content has	been disabled. Click for more details. Enable Content												
t i × ✓ fr https	c//en.vietnamplus.vn/over-100-wind-power-plants-register-t	o-supply-electricity-to-nat	ional-grid/2058	76.vnp			1						
ABC	.D	G	H	1 1 1 1	KII	M	NO	P	OR	ST	U	V	W
	date url		- entity -										
	21-08-05 Over 100 wind power pl https://en.vietn.mt us.vn/o		U	0 set()			1						
	21-08-05 Over 100 wind power pl https://en.vietnamplus.vn/o		['Vietnam		nd power plant	ts register to supp	ly electricity to	national g	rid A total of 105 win	d power plants natio	nwide with	a combine	d capacity
2 vietnam wind 202	1-08-05 Over 100 wind power pl https://en.vietnamplus.vn/o	ve Capacity	['5,655MW	1 {'A total of :	06 wind power	plants nationwid	le with a combi	ined capacit	ty of more than 5,65	SMW have registered	to conduct	commercia	al operatio
3 vietnam wind 202	21-08-05 Over 100 wind power pl https://en.vietnamplus.vn/o	Monetary value	D	0 set()									
4 vietnam wind 202	21-07-26 Vietnam's future transit https://www.vietnambreakin	Country or City	Wetnam	7 [['Vietnam'	future transiti	ion to offshore wi	nd auctions The	erefore, the	e trend of developin	g renewable energy	n the world	, including	wind pow
	21-07-26 Vietnam's future transit https://www.vietnambreaki		Portshore							re wind project, Offs			
6 vietnam wind 202	21-07-26 Vietnam's future transit https://www.vietnambreakin	investment	['FIT']	1 (' Ahead o	f auctions bein	g introduced, ban	kability of the s	current PPA	should be improve	d to attract foreign in	restment.';	PPA bank	ability will
7 vietnam wind 202	21-07-26 Vietnam's future transit https://www.vietnambreaki	Project	['Institute	5 Vietnam's f	uture transition	n to offshore wind	auctions There	efore, the t	rend of developing	renewable energy in	the world, in	ncluding w	ind power
8 vietnam wind 202	21-07-26 Vietnam's future transit https://www.vietnambreaki	Capacity	['1125GW'	1 ('Speakers a	t the GWEC-lea	d panel discussion	"Vietnam\'s Fi	uture Trans	ition to Offshore W	nd Auctions* The rep	ort "Vietnan	n\'s Future	Transition
9 vietnam wind 202	21-07-26 Vietnam's future transit https://www.vietnambreaki	Monetary value	0	0 set()									
10 vietnam wind 202	21-07-27 WPD teams up with Sing https://www.theasset.com/a	rt Country or City	['Hanoi', 'F	9 [['The wind	farm is located	around 780 kilom	etres southeas	st of the Vie	tnamese capital Ha	noi, in the central hig	hlands of Ko	n Tum Pro	vince.'], [*
11 vietnam wind 202	21-07-27 WPD teams up with Sing https://www.theasset.com/a	rt Decision maker	['Sudhir N	3 [["Vietnam	's potential for	wind energy is a l	key element in	the countr	y's plan to double it	s use of renewable er	ergy to me	et rapidly g	growing el-
12 vietnam wind 202	21-07-27 WPD teams up with Sing https://www.theasset.com/a	rt Investment	0	0 set()									6
	21-07-27 WPD teams up with Sing https://www.theasset.com/a		['Kon Plor							ewables developer W			
	21-07-27 WPD teams up with Sing https://www.theasset.com/a		0	0 {"The project	t, planned for a	a total capacity of	up to 103.5MW	, was initia	ted by Levanta, and	has moved forward w	ith support	from Vietn	namese pa
	21-07-27 WPD teams up with Sing https://www.theasset.com/a		0	0 set()									
	21-07-28 Wind developers ask for https://vir.com.vn/wind-dev		['Duy Thie							andemic is disrupting			
	21-07-28 Wind developers ask for https://vir.com.vn/wind-dev		['VND', 'VI	5 {'However,	GWEC explaine	ed in its report the	at high industry	and invest	or interest indicates	that Vietnam could i	aise its amb	ition to 100	GW by 203
	21-07-28 Wind developers ask for https://vir.com.vn/wind-dev		['wind']							y growing power den			
	21-07-28 Wind developers ask for https://vir.com.vn/wind-dev		['3,487MW							that Vietnam could r			5W by 2031
	21-07-28 Wind developers ask for https://vir.com.vn/wind-dev		0							ees an investment of			
	21-07-22 Offshore wind power in https://www.evwind.es/202		['Denmari							nd support schemes t			
	21-07-22 Offshore wind power in https://www.evwind.es/202		['Michael							policy solution for Vi			
	21-07-22 Offshore wind power in https://www.evwind.es/202		0							st, and a number of p			
	21-07-22 Offshore wind power in https://www.evwind.es/202		['The Rend							Council, in cooperatio			
	21-07-22 Offshore wind power in https://www.evwind.es/202		['2GW', '45		o, GWEC Head	of Asia Tweet"GW	VEC is calling on	the Vietna	imese government	to urgently adopt a tr	insition stag	tor offsh	ore wind,
	21-07-22 Offshore wind power in https://www.evwind.es/202		0	0 set()									-
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin		['Taiwan',							ecially in Taiwan.'], [*			
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin		['Maya Ma							rporation is pleased t	o partner wi	itn reputab	se compar
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin		['Niras Gre						Axys Technologies a			hudered	hanna tada
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin		['Copenha							evelopment Corpora			
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin 21-07-21 Awarded: Geotechnical https://www.upstreamonlin		0		uesoay said the	e awaro is part of i	CIP 5 developm	sent plan to	r the La Gan offshor	e wind project in Vie	nam which,	with a pot	ventiai cap
	21-07-21 Awarded: Geotechnical https://www.upstreamonlin 21-07-23 WPD enters Vietnamese https://renews.biz/71155/wg		0	0 set() 0 set()			1						-
	21-07-23 WPD enters Vietnamest https://renews.biz/71155/w 21-07-23 WPD enters Vietnamest https://renews.biz/71155/w		U I'Kon Tum		Vietnamoro d	one power marke	A Corman daug	loner MIDD	has optored the Vis	tnamese clean powe	marketing	anteorchic	o with Cine
	21-07-23 WPD enters Vietnames https://renews.biz/71155/w		['103.5MV							aily reNEWS.biz new			
	21-07-23 WPD enters Vietnames( https://renews.biz/71155/wj 21-07-23 WPD enters Vietnames( https://renews.biz/71155/wj		(103.5MM	1 ('The 103.59 0 set()	www.kon Piong,	within its located in	in the province i	or Kon Tum	, riedse select the L	ony renews.bit new	metters that	you would	a nke to re
	21-07-23 WPD enters Vietnamest <u>https://renews.biz/71155/w</u> 21.07.27 Iberdrola acouires Sowii https://www.theaset.com/s		U PAustraliz		ar a target to i	netall more then 7	0.000000	nousble e	norm by 2020 and a	n is an important new	market for	therdrole	which also
Sheet1- (+)	Contract of the second s	in a number of the		vioinam						n is an important new	man a di trit	manifold	Mertin co diffe





Navigation E	Bar
--------------	-----

#### INTRODUCTION

- MICE sector in Covid-19 world
- Singapore and the future of events
- Re-defining lead generation

#### **HOW TO GUIDE**

Introduction to the industry POC

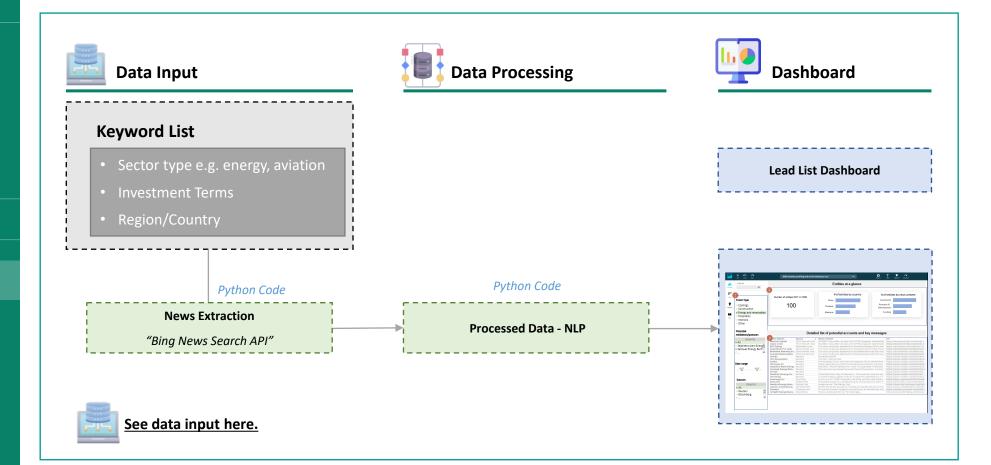
#### Step-by-step guide



Summary

#### Industry Use Case

Users will key in the necessary keywords to the input file and the Bing news API search coupled with Named-Entity-Recognition NLP algorithm will be executed to generate the desired results in the output file.







Ready, set, go!

#### INTRODUCTION

MICE sector in Covid-19 world

Singapore and the future of events

Re-defining lead generation

HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide



## Supporting event organisers to easily process data through NLP to fit their lead generation needs

This tool is built to help event and venue organisers easily replicate the success of a DTP project conducted with an event organiser. By following these 3 simple steps, any user would be able to replicate a similar tool that is closely suited to their business needs.

Click on each steps below for more details.

### Setting up the environment

To execute the python file and set up appropriate news API key

Exe	cutin	g the	code
		0	

STEP 2

Run python file and generate results based on specific parameters outlines

malavsia

thailand

Run Selected

Industry key wor

wind energy tech STEP 3

#### **Reviewing the results**

Review extracted information in an automatically generated excel file

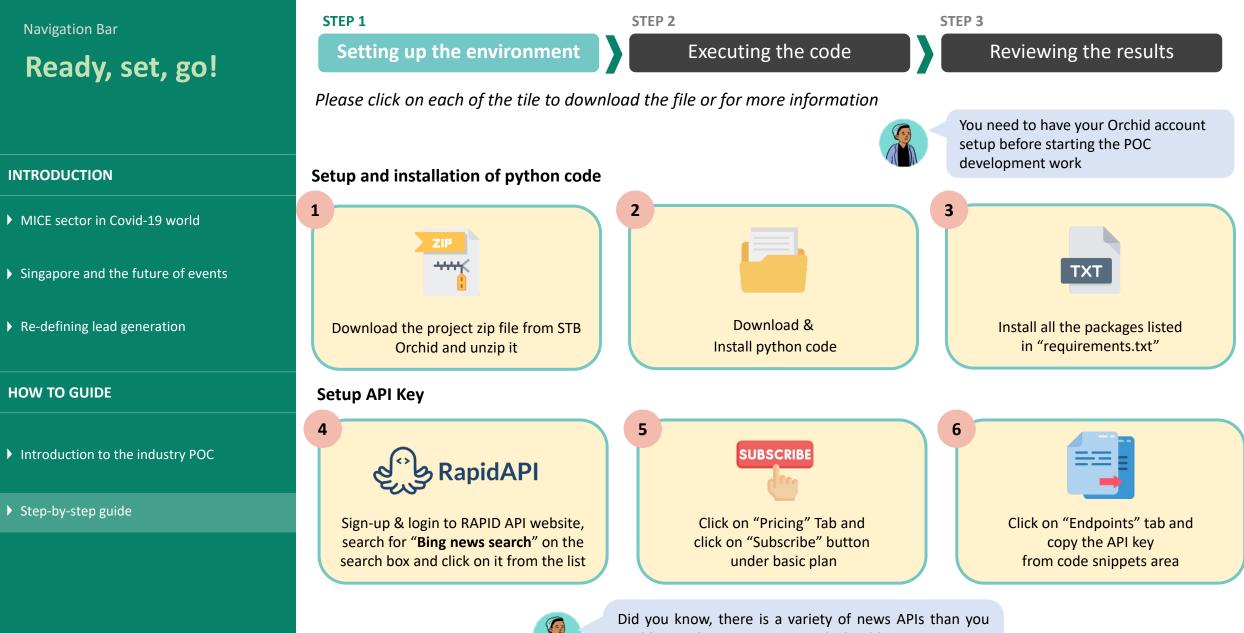
Al A
Al         Bit Mark         B
B         C         D         F         G         H         Interaction           2         contram         scienting         scientin
B         C         D         F         G         H         Interaction           2         contram         scienting         scientin
Image: Second
2         Outcome         Section         Sect
1         Image: State in the state in
1         Deciman state         The state is a point of the state is a point point of the state is a point of the state is a point po
1         Contrast total         Televisian         Televisian </td
1         Sectors         Sect
8         To kinema sub           9         To kinema sub           10         Solaram sub           10         Solaram sub           10         Solaram sub           11         Solaram sub           12         Solaram sub           13         Solaram sub           14         Solaram sub           15         Solaram sub           16         Solaram sub           17         Solaram sub           18         Solaram sub           19         Solaram sub           10         Solaram sub
0         Features         Sectors         Sec
11         Piorteam         Fioreman         F
Image: Contrast static         Image: Conttatic         Image: Contrestatic
11         Liveram         setterm         Set
ID         Determin         State (Control to the Control to the Contr
Dimensional         Dimensional <thdimensional< th=""> <thdimensional< th=""></thdimensional<></thdimensional<>
Bit Instrument         Bit Ins
ID         Identity         I
Bit         Generation         Control         Control <thcontrol< th="">         Control         <thc< td=""></thc<></thcontrol<>
19 DZ wetsem solar settem solar settem for the deals https://ch.Monetray.Teventy. 11 (The group provides energy to easily 120 million propile in deals of deals of deals of the deals of t
20 IB Versam oubr massaum Mainstrea https://rc.fourtro.gl/Versam 1 [[Mainstream to buy stake in 405MW Versamese sofar Mainstream Rer 21 IB Versam oubr massaum Mainstrea https://rc.fourtro.gl/Versam" 0 until 5 Shert ]
21 19 vietnam solar ######## Mainstrea.https://re.investmer[] 0.set()
Sheeti 💿
Ready 🔠 🛙





**STEP 1** 





**Singapore** TOURISM BOARD



Did you know, there is a variety of news APIs than you could use. The new API you pick should contain content that is relevant to your sales direction!



Ready, set, go!

INTRODUCTION

MICE sector in Covid-19 world

• Singapore and the future of events

▶ Re-defining lead generation

HOW TO GUIDE

Introduction to the industry POC

Step-by-step guide

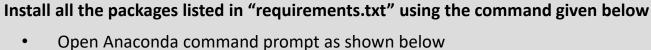
Set

**STEP 1** 

**STEP 3** 

Reviewing the results

Please click on each of the tile to download the file or for more information





Navigate to unzipped directory and run following command to install packages as shown below



- Upon completion of above step, run following comments one by one on same command prompt
  - pip install -U pip setuptools wheel -user
  - pip install -U spacy
  - python -m spacy download en\_core\_web\_sm
  - python -m spacy download en
  - pip install xlrd==1.2.0

could use. The new API you pick should contain content

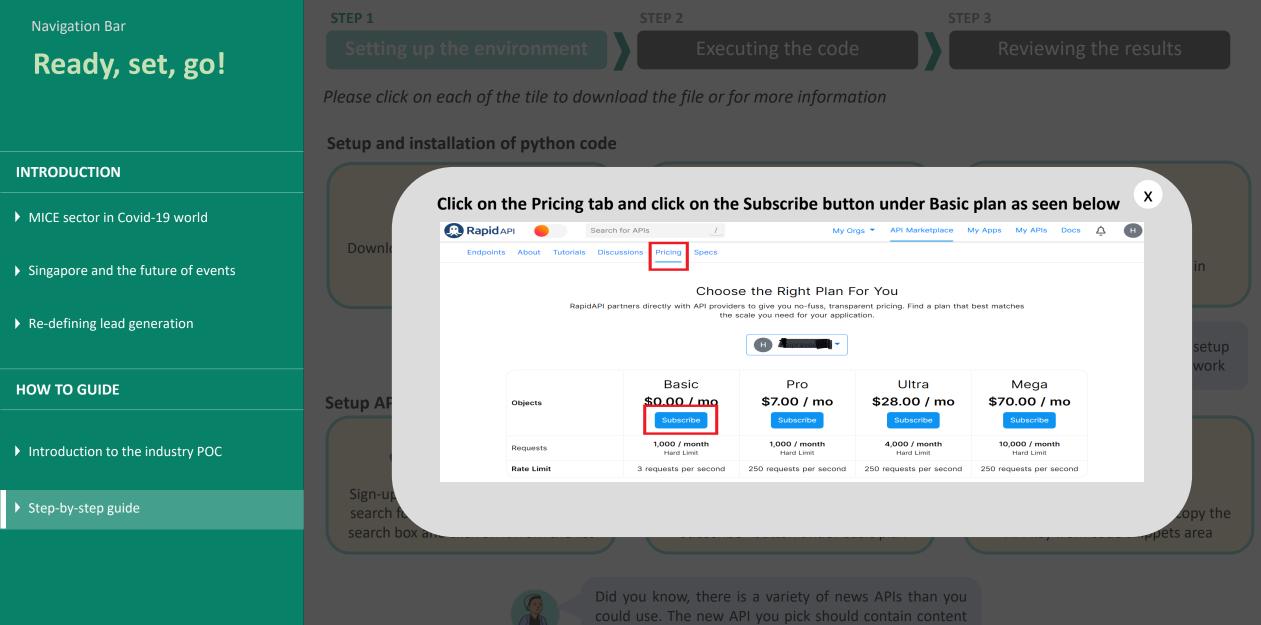
at is relevant to your sales direction!





Х



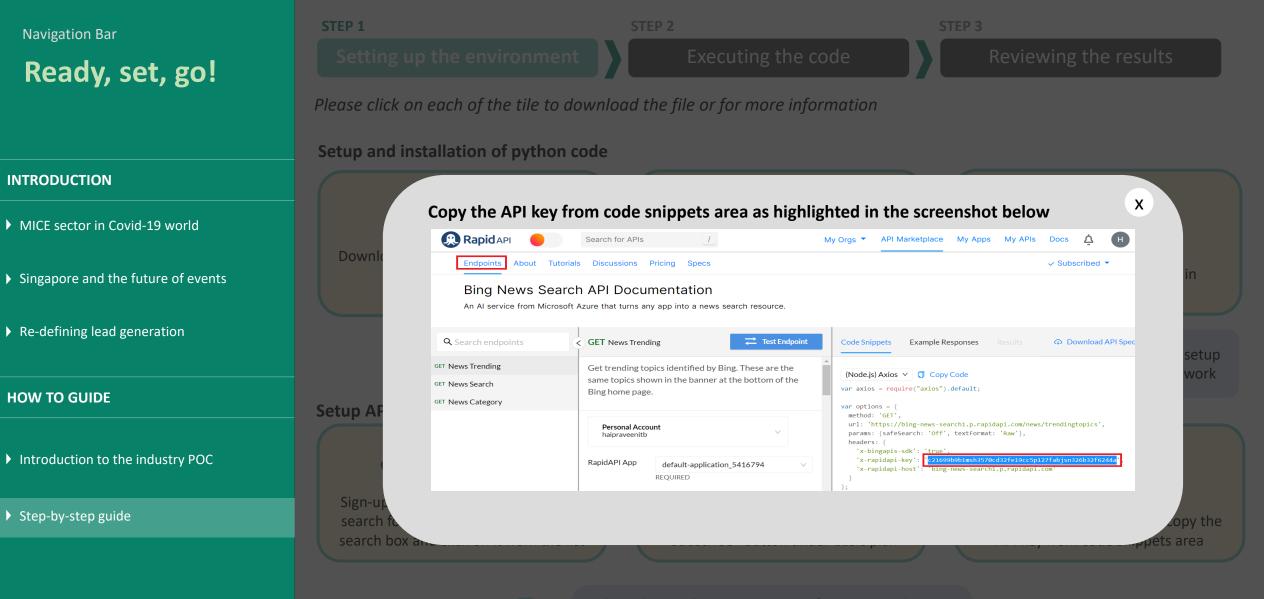






at is relevant to your sales direction!









Did you know, there is a variety of news APIs than you could use. The new API you pick should contain content that is relevant to your sales direction!

Examples of common used News APIs

Next 👂

Ready, set, go!

INTRODUCTION

MICE sector in Covid-19 world

• Singapore and the future of events

Re-defining lead generation

**HOW TO GUIDE** 

Introduction to the industry POC

Step-by-step guide

Please click on each of the tile to download the file or for more information

Setup and installation of python code

		News API	Bing API	Newscatcher API
1	Eco Business	NO	YES	NO
2	Bloomberg	YES	YES	YES
3	Reuters	YES	YES	YES
4	Bangkok Post	YES	YES	NO
5	Straits Times	YES	YES	NO
6	Jakarta Post	NO	YES	NO
7	CNBC	YES	YES	YES
8	Nikkei Asia	YES	YES	YES
9	The Star online	YES	YES	YES



Did you know, there is a variety of news APIs than you could use. The new API you pick should contain content that is relevant to your sales direction!



**Examples of common used News APIs** 



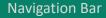
oets area



**Setup** 

Navigation Bar <b>Ready, set, go!</b>	STEP 1     STEP 2     STEP 3       Setting up the environment     Executing the code     Reviewing the results
INTRODUCTION	Execute Python file
<ul> <li>MICE sector in Covid-19 world</li> <li>Singapore and the future of events</li> </ul>	Open the python file in notepad and replace "XXXXX" api_key with the key generated in previous step, then save and close the file data = newsapi.get_everything(q='Renewable Energy', language='en', page=5)
<ul> <li>Re-defining lead generation</li> </ul>	8 B
HOW TO GUIDE	Run the python file using the command shown (base) C:\>python MICE_Industry_poc.py in screenshot in the command prompt
Introduction to the industry POC	9
Step-by-step guide	Upon executing the python code, a user interface will pop-up where user has to select interested sector & interested country from the drop down list then click "Submit" This is where you can run the programme and get your results!  C Back

Navigation Bar <b>Ready, set, go!</b>	Setting up the environment Exe	ecuting the code <b>Reviewing the results</b>
INTRODUCTION MICE sector in Covid-19 world	Review results 10 Results are stored in multiple files under "Output	clony       Verv         is PC > Downloads > DMG Tool > Project Directory >       >
<ul> <li>Singapore and the future of events</li> <li>Re-defining lead generation</li> <li>HOW TO GUIDE</li> </ul>	11 Once the search process is completed, files will be listed by country	Autobar III III IIII IIIIIIIIIIIIIIIIIIIIIII
<ul> <li>Introduction to the industry POC</li> <li>Step-by-step guide</li> </ul>	12 In each country file you can access the search output xls under: (\Project Directory\output) This is where you can obtain and use data points as leads!  C Back	Image: state of the state



#### INTRODUCTION

- MICE sector in Covid-19 world
- Singapore and the future of events
- Re-defining lead generation

#### HOW TO GUIDE

Introduction to the industry POC

#### Step-by-step guide

<b>Singapore</b> TOURISM BOARD
--------------------------------------

## S Back

## Adapting NLP Tool for other industries

This tool can be adapted to other industries by changing the key words in the input excel file. The illustrated example shown below is for the Medical industry.

1 c 2 t 3 n 4 iii 5 v 6 s 7 c

18

When setting up the environment and API, open the input excel file from input directory.

Add key words related and specific to the Medical industry as shown in the image

Run the python code and validate the results with new keywords input in the excel.

#### 4

1

2

3

Continue refining the keywords in input excel file until desired results are achieved.

А	В	С	D
country	alias	Medical	invest
thailand	thai	MedTech	fund
malaysia	malay	Medical equipment	financ
indonesia	.id	Medical device	million
vietnam	.vn;viet	Meidcal manufacturing	billion
singapore	.sg	Biomedical	trade
china	.cn;chinese	Biotechnology	import
		Pharmaceutical	contract
		Pharma	commission
		Pharmbio	project
		Healthcare	buy
		Pathology	expand
		Rehabilitation	sell
		Dental	develop
		Dentisty	venture
		Orthodontics	invest
		Eldercare	invest.
		Ageing	investor
		Dermatology	investment
		Derma	investing
		Laboratory	invested
		Health Security	partner
		Vaccine	acquisition
		Patient	subsidiary
			public offer
			plan
			acquire



Adapting the NLP tool for other industries



# THANK YOU!

