# **A\*STAR's assistance to SMEs**

### (3 June 2016)

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#### **CREATING GROWTH, ENHANCING LIVES**

Agency for Science, Technology and Research

# **ABOUT A\*STAR**



### A\*STAR's Family







*"A\*STAR's role is to be the Singapo* engine for transforming the economy into a knowledge-based and innovation-driven one."



# Singapore's Lead Government Agency for Economic Oriented R&D



KPI numbers CAA 31 March 2015

### A\*STAR

# **Mission:** We advance science and develop innovative technology to further economic growth and improve lives





### **SERC Core Capabilities**

#### **Electronics**

Semiconductors Data Storage Electronic Components Electronic Modules Network Technology

### Chemicals & Materials

Specialty Chemicals Performance Materials Bio-Pharma Processing Functional Films Data Storage Microelectronics Infocomm Sciences Computational Sciences Material Science Chemical Sciences Manufacturing Technologies Metrology

### Infocomm & Media

Communications Software & Computing Digital Content & Media Networking

### Engineering

Precision Engineering Aerospace Marine Oil & Gas Automotive Logistics & Supply Chain Management

### **SERC RIs & Entities**

#### Electronics



Semiconductors Data Storage Electronic Components Electronic Modules Network Technology



### Chemicals & Materials



Specialty Chemicals Performance Materials Bio-Pharma Processing Functional Films Data Storage Microelectronics Infocomm Sciences Computational Sciences Material Science Chemical Sciences Manufacturing Technologies Metrology

**CREATING GROWTH, ENHANCING LIVES** 

#### Infocomm & Media

Communications Software and Computing Digital Content and Media Networking



#### Engineering

Precision Engineering Aerospace Marine Oil & Gas Automotive Logistics & Supply Chain Management









### **BMRC Core Capabilities**







Value Chain

### **TECHNOLOGY TRANSFER**

#### A FULL SPECTRUM TECHNOLOGY TRANSFER OFFICE











# How to work with us



### **Industry Engagement**



Agency for Science, Technology and Research

SINGAPORE

### From Mind to Market How A\*STAR can help

#### What do I need?

#### Identify technology needs

- GET-Up: Operation and Technology road mapping ("OTR")
  - Five Facilitated workshops
  - Defined technology roadmap created by management of companies with the support from OTR specialists Ris
  - Use of Innovation and Capability voucher allowed

Grow your business with technology

#### Improve productivity

- Technology Adoption Program (TAP)
- 27 Ready-To-Go packages

#### Growth

- Projects with RI
   One-to-one
   CIP / value chain projects
- Gap-funding
- Centres of Innovation (COIs)
  - Materials COI and PE COI

#### Go to market

#### **Technology licensing**

- Headstart Program
- Simplified Licensing Terms

#### Tech transfer / support

- GET-Up: Technical advisory / consultancy
- GET-Up: T-UP

![](_page_11_Picture_23.jpeg)

Agency for Science, Technology and Research

### **For More Information**

SME Website: <u>http://www.a-star.edu.sg/SME</u>

<u>A\*STAR's Ready-To-Go Technology Packages:</u> <u>http://www.a-star.edu.sg/sme/OUR-</u> <u>PROGRAMMES/READY-TO-GO-PACKAGES.aspx</u>

A\*STAR's iSME Newsletter <u>http://www.a-star.edu.sg/sme/ISME-</u> <u>NEWSLETTER/iSME-Newsletter-Page.aspx</u>

CREATING GROWTH, ENHANCING LIVES

Contact: Serena\_tan@a-star.edu.sg

![](_page_12_Picture_5.jpeg)

# **THANK YOU**

![](_page_13_Picture_1.jpeg)

# **The OMNI Programme**

### Strategies for Productivity Improvement to Achieve Operational Excellence

![](_page_14_Picture_2.jpeg)

Manufacturing Productivity Technology Centre

![](_page_14_Picture_4.jpeg)

![](_page_14_Picture_6.jpeg)

### **Productivity Concepts**

![](_page_15_Figure_1.jpeg)

![](_page_15_Picture_2.jpeg)

![](_page_15_Picture_4.jpeg)

# **OMNI Approach**

The challenge for companies who want to achieve and sustain their competitive position and deliver extraordinary levels of distinctive value to selected customers (*World Class Productivity*), is therefore to adopt a

Proactive,HolisticandTotalValueChainApproach(Strategic Methodology)

![](_page_16_Figure_3.jpeg)

![](_page_16_Picture_4.jpeg)

![](_page_16_Picture_6.jpeg)

# 5 stages ONNI Strategic Methodology

![](_page_17_Picture_1.jpeg)

![](_page_17_Picture_2.jpeg)

![](_page_17_Picture_4.jpeg)

# **OMNI approach** (OmniMethodology™)

![](_page_18_Picture_1.jpeg)

![](_page_18_Picture_2.jpeg)

![](_page_18_Picture_4.jpeg)

![](_page_19_Picture_0.jpeg)

Operational Excellence

you have your processes so under control that you deliver **best total cost** 

to your customers

# **OMNI Toolbox**

![](_page_19_Picture_5.jpeg)

the customer has turned over an entire process to you. You are creating the best total solution

for the

or Industry

customer

Performance Threshold

Product Leadership you sell the best product on

![](_page_19_Picture_11.jpeg)

the market

Source: The Discipline of Market Leaders (Treacy & Wiersema)

![](_page_20_Figure_0.jpeg)

![](_page_20_Picture_1.jpeg)

![](_page_20_Picture_3.jpeg)

![](_page_21_Figure_0.jpeg)

![](_page_21_Picture_1.jpeg)

![](_page_21_Picture_3.jpeg)

#### Stage 4 Generate **GENERATE AND**

# **OMNI Toolbox**

PRIO	PRIORITIZE INITIATIVES		Improvement	t avaa #1		Current per	riod		Future period			
	RIORITIZE INITIATIVES		Improvemen	it area #1	Quantity	Price	Value	Quantity	Price	Value	Index	
	2			Output:	Product 1 Product 2	1000 100	30.00 190.00	0 \$30,000 0 \$19,000	1100 80	30.00 190.00	\$33,000 \$15,200	
1	12				Total Output			\$49,000			\$48,200	0.98
T	1	15C		<b>Input:</b> Labor								
a 1			1928		Activity 1	3000	5.00	\$15,000	2500	5.00	\$12,500	
1					Activity 2	600	6.00	\$3,600	500	6.00	\$3,000	
								\$18,600			\$15,500	0.83
				Material			1.0		7000	1.00	ć7.000	
	Cate	gories		Tools/Techniques			1.00	56,000 \$6,000	/000	1.00	\$7,000 ¢000	
Technology based		<ul> <li>Computer Integrate</li> <li>CAD/CAM</li> </ul>	ed Manufacturin	Ig	2.00	5 \$1,200 5 \$600	300	2.00	\$500 \$600			
based • Rob				<ul> <li>Robotics</li> <li>Maintenance Mana</li> </ul>	gement		2.00	\$7,800	500	2.00	\$8,500	1.09
		Categ	ories	Tools/Tech	niques			<u> </u>			<i>+ - /</i>	
		Pro	Cess	Supply Cha	Supply Chain Management					0.15	\$1,200	
			- d	Business P     Value Stre	Business Process Re-engineering					1.00	\$250	
		bas	ea	Flow Prince	ciple and Layout	t		\$1,700			\$1,450	0.85
		C	ategories	Tools/Tech	niques							
			<b>Aaterial</b>	Material R     Materials	lequirements Plar Management	nning		\$10,000	\$100,000	0.100	\$10,000	
		b	ased	Material R	Material Recycling					0.073	\$13,080	4.40
			Categories	Material H     Tools/Ter	landling System II	mprovement		\$20,900			\$23,080	1.10
			Deselves	Value Et	ngineering	_	_	2.63			348,550 3 11	1.18
			Produc	• Product	Variety			6.28			5.67	0.90
			based	Categories	Tools/Techniq	ues		2			33.24	1.15
	Categories       Technology         Technology       .         based       .         Categories       .         Process       based         Dased       .         Categories       .         Material       based         Dased       .         Technology       .         Based       .         Process       .         Based       .         Material       .         Based       .         Tocols a       .		Employee	Fringe Benefi     Employee Bro	its 1		1			2.09	0.89	
			_	based	Job Enrichme	ent		)			0.99	0.99
		T		and	<ul> <li>Training/Educ</li> </ul>	cation						
				und	Learning Curv	ve						
		To	chni		<ul> <li>Communicati</li> <li>Working Cond</li> </ul>	ion dition Improver	ment					
				yues								

![](_page_22_Picture_3.jpeg)

![](_page_22_Picture_5.jpeg)

![](_page_23_Picture_0.jpeg)

# **OMNI Toolbox**

Action	Improvement Areas	Initiatives	Responsibilities	Budget	<b>Duration</b> (time required to complete initiative)	Start Date (project kick off)	Deliverables*
	Order Processing Process	Re-design the Pre-press process between Program and Pre-press functions	Roland	\$25,000	4 months	June 2011	<ul> <li>Improve customer response time by <u>25%</u></li> <li>Labour productivity gain by <u>10%</u></li> </ul>
	Material Ordering Process	Re-design the Paper Ordering Process between Material Planning and Program functions	Goh	S\$30,000	6 months	June 2011	<ul> <li>Reduce labour cost by <u>23%</u></li> <li>Reduce material holding cost by <u>5%</u></li> </ul>
	RM Allocation	Simplify / Automate the Paper	Amrik	S\$4,000	3 months	Sep 2011	Reduce Labour cost by <u>60%</u>
Paper Ordering Process Paper Allocation Process Set-up Material Reduction Flow Materials Transfer Process	Bid         Producting           72/5         2%           #1         8%           #1         8%           17/5         3%		Roland	S\$2,000	3 months	June 2011	<ul> <li>Improve labour productivity by <u>10%</u></li> <li>Improve material productivity by <u>20%</u></li> </ul>
Fulfillment Order Processing	19/3 27/4						<ul> <li>Reduce ROG cost, sorting</li> </ul>
	Contract of the second s	Description	and the second se				
Cang up Printing QX Proofing Process for Around Piles Set-up time Reduction for the Cover New Simplification Work New Simplification			P	DSA	Cycle D	iscipl	ine
Cang up Provide A Providing Pages to Advance Secure Vige Endedstates for Device Work Pages Endedstates Control Programs Standard Programs Control Programs Standard Standard Standard Standard S			Р к 1-3	DSA	<b>Cycle D</b> Week 4-6	iscipl	ine Veek 7-9
Cang up Provide A Provide Provide Anton Can Provide Provide Anton Mark			P .k 1-3		Cycle D Week 4-6		veek 7-9
			P Rk 1-3 P Rk 1-3 P Restriction P Restr		Cycle D Week 4-6	iscipl M M M M M M M M M M M M M M M M M M M	veek 7-9
			P Rk 1-3		Cycle D Week 4-6	iscipl M M M M M M M M M M M M M M M M M M M	ine Veek 7-9
			P k 1-3 week	DSA	Cycle D Week 4-6	iscipl M M M M M M M M M M M M M M M M M M M	ine Veek 7-9
			P k 1-3 k 1-3 week a-week roductivity cyc		Cycle D Week 4-6	iscipl M M M M M M M M M M M M M M M M M M M	ine Veek 7-9

![](_page_23_Picture_3.jpeg)

STAGE

![](_page_23_Picture_5.jpeg)

# **How we deliver OMNI Programme ?**

![](_page_24_Picture_1.jpeg)

**SIMTech and WDA jointly developed** this programme to improve productivity of companies by transfering knowledge and developing <u>productivity champions</u> to sustain productivity improvements and achieve operational excellence.

![](_page_24_Picture_3.jpeg)

![](_page_24_Picture_5.jpeg)

# **Thank You**

![](_page_25_Picture_1.jpeg)

Thank you for your attention Any Questions?

![](_page_25_Picture_3.jpeg)

![](_page_25_Picture_5.jpeg)

![](_page_26_Picture_0.jpeg)

# wfMOBILE<sup>TM</sup>

### (Generic Mobile Workflow)

Dr Justin Lim, MPTC June, 2016

![](_page_26_Picture_5.jpeg)

# Agenda

- Background & Introduction
- Generic Mobile Workflow Setup
- Sample Mobile Flows
  - Goods Delivery Mobile Workflow
  - Process Assembly Mobile Workflow
  - Employee Mobile Communications Workflow
  - Printing Process Tracking Mobile Workflow
  - Vehicle Repair Workshop workflow
- Reports
- Future Work to be done

![](_page_27_Picture_11.jpeg)

![](_page_27_Picture_13.jpeg)

### Background

- Many SMEs still rely on paper travelers / jobsheets to track key production processes
- Reasons :
  - Cost
  - Difficult to implement
- As a result, no data for analysis

### **Target Applications**

- Simple workflows for SME process tracking
- Target applications without mobile workflow
- Work process tracking & Onthego resource management

![](_page_28_Picture_10.jpeg)

![](_page_28_Picture_11.jpeg)

![](_page_28_Picture_12.jpeg)

![](_page_28_Picture_13.jpeg)

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![](_page_28_Picture_15.jpeg)

# wfMOBILE<sup>TM</sup>

- Objectives
  - Low-cost generic mobile workflow applications
  - Easily configurable to fit into various industry scenarios
  - Mass deployment
- Features
  - No programming needed to enable mobile workflow
  - Configurable GUI
    - Database, GUI and Flow are auto-created
  - Conditional flows and calling of new web services
  - Web services for interfaces to other systems

![](_page_29_Picture_11.jpeg)

![](_page_29_Picture_13.jpeg)

### wfMOBILE<sup>TM</sup> Workflow Setup

![](_page_30_Figure_1.jpeg)

Singapore Institute of Manufacturing Technology

# Workflow Generator

App_Name	Step_Name Step	oNo	UserGroup	NextStep	NextUser	Remarks	СотрТуре	Label	Attribute	CompType	Label	Attribute
SemiAssemblyFlow	Lot Start 1	1	Planner	2	GROUP	Lot Start	BARCODE_INPUT	Lot Num	E,U	LIST_INPUT	Device	E
SemiAssemblyFlow	Saw 2	2	SawGroup	3	GROUP	Saw	ТЕХТВОХ	Lot Num	E	TEXTBOX	Device	E
SemiAssemblyFlow	DieAttach 3	3	DieAttachGroup	4	GROUP	DieAttach	ТЕХТВОХ	Lot Num	E	TEXTBOX	Device	E
SemiAssemblyFlow	Mold 4	4	MoldGroup	5	GROUP	Mold	ТЕХТВОХ	Lot Num	E	TEXTBOX	Device	E
SemiAssemblyFlow	Test	5	TestGroup	6	GROUP	Test	TEXTBOX	Lot Num	E	техтвох	Device	E

![](_page_31_Picture_2.jpeg)

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# GUI Objects & Attributes Available

Name	Description
TEXTBOX	Display Text
ACPT_RJCT_RMK	Accept or Reject
INPUTBOX	Enter text
DATE_INPUT	Select Date
SUBMIT_BUTTON	Update the workflow with user input
DATE_BUTTON	Get the Current Date
CREATE_BUTTON	Create the Workflow
LIST_INPUT	Select the value from list
USERNAME	Automatically with logged username
SIGNATURE_INPUT	Capture the signature from app
DATE_TIMERANGE_INPUT	Enter date with time range
IMAGE_DISPLAY	Display the Store image
ADDRESS_INPUT	Enter address by postal code
CAMERA_INPUT	To Capture image
CAMERA_DISPLAY	Show the image
BARCODE_INPUT	Scan the barcode and get the value
ID_INPUT	Generate Unique id
GROUP_INPUT	Select a group from list
MESSAGE_INPUT	Enter Multiline Text
MESSAGE_DISPLAY	Display Multiline Text
BROADCAST_BUTTON	Assign the workflow to multiple users

Attribute	Action	Description
А	Any	Any type of value. Character or numeric value.
D	Disable	Not visible in the mobile.
E	Enable	Visible in mobile
A_NUM	Any numeric value	
U_NUM	Unique Numeric	
C_[Field Name]	Copy the relevant Field	Copy value to the next step
	Greater than	For Date input ,date must be newer than specified field
>		For number value must be greater than specified field
	Greater than or equal	For Date input ,date must be equal or newer than
		specified field
		For number value must be equal or greater than
>=		specified field
	Less than	For Date input ,date must be older than specified field
<		For number value must be less than specified field
	Less than or equal	For Date input ,date must be older than old specified
		field
<=		For number value must be less than old specified field

![](_page_32_Picture_3.jpeg)

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# Workflow Reporting

Det	tailReport	Dashbo	bardView	SummaryReport	Logout						
						DetailR	leport				
	Proce	essFlow 🗸	01/	05/2016	11/05/2016		Submit				
<											>
Priority	Client	Job Num	ETD	Step Name	Operator	Time	Sales Staff	Finishing	Extent	Output	Fc
Medium	нмс	21143	03/05/2016				Yeoh	,na		PDF	
											Г
				DTP-Out	Heng	03/05/2016 11:00:40					
High	Масі	14176	03/05/2016				Wong	,NA	cover slipcase	Epson	
				DTP-In	Kuan	03/05/2016 09:31:33					
				DTP-Out	Kuan	03/05/2016 16:19:41					
				PackAndShipToCustomer-In	Wong "	03/05/2016 16:21:05					
				PackAndShipToCustomer-Out	Wong	09/05/2016 13:56:36					
				PendingCustomerApproval	Wong .	09/05/2016 13:57:43					
											~
Madium	Darragon	AC75200	03/05/2016				Wong Khang Yiong	NA	100	DDF approval	

ExportToExcel

![](_page_33_Picture_3.jpeg)

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# Sample wfMOBILE<sup>TM</sup> Flows Demo

- Goods Delivery Workflow
- Process Assembly Workflow
- Employee Mobile Communications Workflow
- Printing Process Tracking Workflow
- Vehicle Workshop Activity Tracking Workflow

![](_page_34_Picture_6.jpeg)

![](_page_34_Picture_7.jpeg)

![](_page_34_Picture_8.jpeg)

Microsoft oint 97-2003 Prese

Microsoft oint 97-2003 Prese

![](_page_34_Picture_10.jpeg)

Microsoft oint 97-2003 Prese

![](_page_34_Picture_12.jpeg)

Microsoft oint 97-2003 Prese

![](_page_34_Picture_14.jpeg)

# Thank You

![](_page_35_Picture_1.jpeg)

![](_page_35_Picture_3.jpeg)
# Making Measurements using Photographs

Associate Professor Lee Yong Tsui School of Mechanical and Aerospace Engineering Nanyang Technological University

## What We Are Offering

- Fast and accurate measurements of the interior of rooms any time, anywhere from photographs.
- Ability to measure linear distances, areas, angles, etc.
- Graphically recording and display of the dimensions.





## What people do now

- Linear measurements using tape or laser guns
- Discrete measurements made individually



## The issues you may have currently

- Discrete measurements taken on site
- Difficulty with inaccessible positions
- Need to make new trips if an essential measurement is missing
- Manual recording and storage of the data
- You cannot easily measure
  - Areas
  - Angles
  - Inclinations

## The new process



# Some FAQs

## What is the accuracy?

- We are working towards 1 mm in 1 m.
- But this depends on the resolution of the photograph.

## What is the required resolution?

- The higher the resolution the better.
- However, it depends on the scale of the object in the photo too.





## What camera can we use?

• Any camera, with as little distortion as possible.

## What distortion?

- Every camera, however good, has inherent distortions. This needs to be corrected.
- We can correct photographs with small distortions.
- We can't deal with fish eye lenses.





## What are the limitations?

- Measure only areas within the photograph
- Must have straight lines and flat surfaces
- Not yet able to deal with curved surfaces

# Thank you.

# World of Artificial Intelligence Agents





Institute for Infocomm Research

Kooki is an I<sup>2</sup>R- A\*STAR spin-off company.





### VISION

Kooki is your hybrid intelligence agent

Kooki recommends actions by adapting to your preferences and data sources.





CEO, this is MI1's current recommendation.

Current: US\$47.44 Expected: **^ US\$48.25** 

Upstream supply: Healthy

Downstream demand: Boom

MI1 Agent

## Market Intelligence One

A enterprise platform (network) of personalised & autonomous artificial intelligence (MI1) agents that unify data, self-evolve, co-create insights, co-share knowledge in the dynamic field of market intelligence.



#### What we have now...

#### LIMELIGHT PLUS -Media Sensing Tool

MARKET INTELLIGENCE 1 (MI1) -Market Research & Intelligence

COMING SOON!



### Unified Insights?





#### Unified Insights?





#### **RSS** Feed

 Statistic from "BuiltWith" puts the number of websites that publish RSS feeds at over 20 million worldwide

Name	10k 🔺	100k	Million	Entire Web	
RSS	<b>1</b> 2,136	€22,165	<b>1</b> 413,804	<b>1</b> 9,808,911	



#### Science & Research Publication



#### Unified Insights?





#### Social Media BOOM





### Social Media is exploding

AVERAGE DAILY USE OF THE INTERNET VIA A PC OR TABLET (INTERNET USERS) AVERAGE DAILY USE OF THE INTERNET VIA A MOBILE PHONE (MOBILE INTERNET USERS) AVERAGE DAILY USE OF SOCIAL MEDIA VIA ANY DEVICE (SOCIAL MEDIA USERS) AVERAGE DAILY TELEVISION VIEWING TIME (INTERNET USERS WHO WATCH TV)



#### 4H 41M 2H 18M 2H 27M 1H 53M

## Social Media is moving faster than ever.

#### In 1 second, there are

2,851

Photos on Instagram **10,364** Tweets on Twitter 54,925

Posts on Facebook

### What does all this mean?

- Your customers are spending A
   LOT of time on social media
- There is so much new content coming online.
- If you're not tapping on it,
   you're losing out!





# How do we harness the rich online content?



## Ontology

Ontology: The categorization of concepts and the relations between them.



Connection between Weather, Rice & Gold





#### Limelight Plus Features

#### Text Analysis

-Sentiments -Trends

#### **Metrics**

-Volume -Day and Time -Content Sources

#### Explore

-Topic Wheel -Tag Cloud -Post List

#### Influencers -Authors -Affinities -Authors Geography

#### **Contextualise People**

🖖 Kooki	= 🖬 🌲		🔡 English Kooki 😽
o;	Summary	Search	م
	Kooki completes in 0.08 seconds		
🚳 Summary			
Text Analysis >	Kooki thinks this is what you want	Volume	c
🗃 Influencers 🕞			
	Jeanette Aw Jeanette Aw Fe-Ping (horn 28 lune 1979), better known by ber stage name Ou Xuan (政音)		
🛢 Database	is a Singaporean actress and author. She has been a full-time Mediacorp artist for 14 years and is managed by Artiste Networks, a subsidiary of Hype Records. Through her television		
â Investment	career, Aw has established herself as one the most popular and high-profile celebrities in Singapore. She has received several awards, including "All-Time Favourite Artiste" at Modernerst for America Autors of Michael was here to the table of the Artiste and Artiste A	◆ 86.1% Jeanette AW	1,554
Sompetitor	Definitions in 2012 and Sol's World: Somebody to Love in 2015 – and starred in musical Beauty World in 2015.	Volume	lotal Posts
🛃 Key Indicator Topics	While in college, Aw entered Route to Glamour, in which she placed first. She signed on	* There are a total of 1,554 posts mentioning your brand / services between Mar 2015 and Mar 2016. Currently (Mar 2016), there is a	
	with SPH Mediaworks and made her acting debut in the 2001 drama Touched. Aw then switched to Mediacorp in 2002 and played Mo Jingjing in Holland V (2003). Aw was named or one of the Mediacorp 2 Propreserve in 2006. After which each exchange with program with the second se	volume increase of 86.1% compared to the previous months.	
🛷 Research & Development	her leading role in acclaimed drama The Little Nyonya (2008). Aw garnered critical appreciation for portraying flawed actress, Zhao Fei Er, in The Dream Makers (2013) and its		
<ul> <li>Policy &amp; Regulation</li> </ul>	2015 sequel. She holds the record for the most Best Actress nominations at the Star Awards without a win, with six. Aw's off-screen roles include duties as a brand ambassador	Sources	
E Contract Constration	for several singapore and international companies.		





#### **Contextualise Companies**

🖖 Kooki			English Kooki 💽
<b>CC</b> LIMELIGHT+	Summary Kooki completes in 0.56 seconds	Search	Q
Summary     Text Analysis     Metrics     Explore    Explore    Influencers    Influencers    Database     Investment     Competitor     Key Indicator Topics     Coverage      Policy & Regulation	<text><section-header><section-header><text><text><text><text><text></text></text></text></text></text></section-header></section-header></text>	Volume	с 13,671 Total Posts
Content Generation			


#### **Contextualise Sectors**

🖖 Kooki			English Kooki
<b>CC</b> LIMELIGHT+	Summary Kooki completes in 2.26 seconds	Search	Q
<ul> <li>Summary</li> <li>Text Analysis</li> <li>Text Analysis</li> <li>Metrics</li> <li>Explore</li> <li>Explore</li> <li>Influencers</li> <li>Influencers</li> <li>Database</li> <li>Investment</li> <li>Competitor</li> <li>Key Indicator Topics</li> <li>Key Indicator Topics</li> <li>Coverage</li> <li>Research &amp; Development</li> <li>Policy &amp; Regulation</li> <li>Content Generation</li> </ul>	<text><image/><image/><section-header><section-header><section-header><section-header><section-header><section-header><text><text><text></text></text></text></section-header></section-header></section-header></section-header></section-header></section-header></text>	• 46.69%.         Total         Volume         • 45.69%.         Total         Volume         • Assertion         • Assertion         Space characteristic         • Assertion         Total         Volume         • There are a total of 66,971 posts about 5g chinese radio between Mart         • Assertion         • There are a total of 66,971 posts about 5g chinese radio between Mart         • Assertion         • There are a total of 66,971 posts about 5g chinese radio between Mart         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between there         • There are a total of 66,971 posts about 5g chinese total or between tor	с 66,971 Total Posts



Jeanette Aw

Jeanette Aw

491

\* There are a total of 491 posts mentioning your brand / services between Jan 2015 and Jan 2016. Currently (Jan 2016), there is a volume increase of 105.3% compared to the previous months.

Volume

### Text Analysis: Sentiments

y f 💩 🖾 🕅		Sentiments		
Show 10 ¢ entries	Search:	Sentimento		
Transformer A Constant	A Cutinut A			
2015-02-07 Lam so provid of Rui En Last one standing as artiste in Singapore without	nstagram! HAHAHAHAI She will never have an instagram one la!			You are in good health!
01:10:53.0 uniquelycandice	Issagram: never never never never missagram one ia:	Rui En		
2015-02-07 RT @uniquelycandice: I am so proud of Rui En. Last one standing as artiste 01:11:55.0 runawaymoments	in Singapore without Instagram! HAHAHAHAI She will never have an	NUL EI		68.53% of your customers are generally happy with your brand /
2015-02-09         #VFVAULT: In 2001, model/actress/singer Rui En takes us on a tour of her N 02:09:13.0           Videofashion	nometown in Singapore! via @aolon http://t.co/we2NgovLLG @RBKD	Neg	gative Positive	services.
2015-02-14 Saya menambahkan video ke daftar putar @YouTube http://t.co/RlcuteEvZ 11:43:41.0 rebycmedia	d Lu Rui En Most Beautiful Women In Singapore			More
y f 급 전 원 Show 10 t) entries	Search:	Santimants		
Timestamp A Content	Sentiment	Sentiments		
2015-01-30 17:00:23.0 Jeanette Aw: A Journey's End in Singapore story: SINGAPORE: From veter AstroArtfin	rans like Li Nanxing to popular stars lik http://t.co/hQSavTWVEX			
2015-01-30 17:01:15.0 Jeanette Aw: A Journey's End in Singapore story http://t.co/sgeVVU978h allionergnews	#latest #news http://t.co/Q8k3bzxsHC	leanette Aw		You are in good health!
2015-01-30 17:08:18.0 Jeanette Aw: A Journey's End In Singapore story http://t.co/BxM1ySN95J Khantimur	#civil_vision (3)	Jeanette Aw		68.75% of your customers are generally happy with your brand / services
2015-01-30 17:20:35.0 dlwr - Jeanette Aw: A Journey's End in Singapore story http://t.co/3CsSaP chuhaizhou	G6pD (B)	Ne	egative Positive	More
2015-01-30 23:06:46.0 Jeanette Aw: A Journey's End In Singapore story rekyp550	<u>(</u>			
2015 02 12 12 0422 0 Development in seven care for largering the Ship May Ship ApODS. House	a case of act imitating life for leane _ http://t.co/bDueckE007			

# Text Analysis: Trends





## Metrics: Volume, Day and Time





Timestamp	Content	Sentiment	Tim
2016-01-18 04:47:54.0	RT @Moncler: Z.Tao and Rui En wearing #moncler at the Singapore ION opening event #monclerfriends https://t.co/PNMESa19JY fuckingcuteness	٢	2016-0
2016-01-18 16:57:12.0	omg Rui En bloody near my house rangefontife_	0	2016-0
2016-01-18 17:56:12.0	Final episode of #zzsf2 tonight! #RuiEn #fangtonglin https://t.co//Qh8VbeY6N RRXD	٢	2016-0
2016-01-18 17:56:42.0	RT @RBKD: Final episode of #zzsf2 tonight! #RuiEn #fangtonglin https://t.co/IQh8VbeY6N jiiaok1301	٢	2016-0
2016-01-18 17:57:55.0	RT @RBKD: Final episode of #zzsf2 tonight! #RuiEn #fangtonglin https://t.co/IQh8VbeY6N Dipar_s1	٢	2016-01

Timestamp 🔺	Content	Sentiment
16-01-18 11:34:26.0	i can relate to jeanette aw's words in the drama so much 你知道黑暗是什么吗 Jia.wan2fly	٢
16-01-18 15:38:30.0	Tonight on #zzsf2#zhaofeier @jeanette_aw #jeanetteaw PS: If you've already watched it, https://t.co/ba9i72n4D3 Jeanius_SG	٢
116-01-18 15:39:44.0	Last episode of #zzsf2 tonight! #zhaofeier @jeanette_aw #jeanetteaw PS: If you've already https://t.co/ba9/72n4D3 Jeanus_SG	٢
116-01-18 17:12:48.0	RT @Jeanius_SG: Last episode of #zzsf2 tonight! #zhaofeier @jeanette_aw #jeanetteaw PS: If you've already https://t.co/ba9l72n4D3 FeierZhao	٢
116-01-18 21:38:00.0	I think Jeanette Aw will win best actress orbigood	٢

## **Explore: Topic Wheel**





## Identify Influencers

🖖 Kooki		<b>A</b>							En	glish Kooki	
o;	Author	S						Searc	h		Q
	Kooki completes i	in 0.02 seconds									
🚳 Summary											
🗎 Text Analysis				Тор /	Authors for julie 1	tan					
				#	Screen Name	Full Name	Posts	Followers	Reach	Marketing	
				1	@Julietan_cxq	Julie Tan 陈欣淇	2	23,348	0		
😁 Influencers		- AV		2	@tca_celebrity	The Celebrity Agency	1	2,146	0		
Authors	(	<b>@Julietan_cxc</b> Julie Tan 陈欣淇	1	3	@SoffyLOVESJB	Sofia	1	1,237	0		
	2	22.240	DEACH	4	@jocelintsy	rangelofruien	1	1,223	0		
	POSTS	FOLLOWERS	REACH	5	@_innigirl	수연's Innigirl	1	1,132	0		
				6	@cmh_970926	지우♥	1	1,026	0		
		Engage									
🛢 Database											
🟛 Investment											

### **Understand Influencers**



#### We know where they are





#### Coming Soon...

Search Browse upload	Uploaded documents: Uploaded Status: 新加坡科学研究院最新科研结果简 Successfully Uploaded 介_2016年5月27日.pdf
Original Text:	Summarized Text:
<u>新加坡科学研究院最新科研结果简介</u> _2016年5月27日.pdf	<u>新加坡科学研究院最新科研结果简介</u> _2016年5月27日.pdf
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	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Word count: 120 Source:联合早报

#### Coming Soon...



#### And much more....





#### Statistics API

•••			
Q Search		Builder Runner T T T Import	Wee 🗸 🚺 🔍
Hist	cory Collections	http://dev.kooki.co/ 0 No env	/ironment 🗸 🗶
Today GET http://de t=1cdf8a GET http://de t=1cdf8a GET http://de t=1cdf8a GET http://de	Add to collection  wkooki.co/ws/webresources/summary? 7/18711313a9e82efc6915861bf6 wkooki.co/ws/webresources/tagcloud? 7/18711313a9e82efc6915861bf6 wkooki.co/ws/webresources/trend? 7/18711313a9e82efc6915861bf6 wkooki.co/ws/webresources/search? wkooki.co/ws/webresources/search? wkooki.co/ws/webresources/search?	Authorization       Headers (0)       Body       Pre-request script       Tests         Body       Cookies       Headers (6)       Status       200 OK       Time       618 ms         Pretty       Raw       Preview       JSON v       프       Image: Son v       Image: Son v	
t=lcdf8a GET http://de t=lcdf8a GET http://de t=lcdf8a GET http://de t=lcdf8a	<pre>/718711313a9e82efc69158 w.kooki.co/ws/webresources/authorgeography? /7187113133a9e82efc69 w.kooki.co/ws/webresources/affinity? /718711313a9e82efc6915861bf w.kooki.co/ws/webresources/author? /718711313a9e82efc6915861bf&amp;q</pre>	<pre>1 * {</pre>	✓ Scroll to response



#### Semantics & Search API

Q Search	Builder Runner 📑 🎦 Import	😒 🧿 In Sync 🛛 Wee		
History Collections	http://dev.kooki.co/	No environme	ent 🗸 🕄	
Add to collection	GET V http://dev.kooki.co/ws/webresources/searchcontext?t=	Lcdf8a718711313a9e82efc6915 Params Send 🗸 [		
GET http://dev.kooki.co/ws/webresources/searchcontext? t=1cdf8a718711313a9e82efc69158	Authorization Headers (0) Body Pre-reque	st O Search	Builder Runner 🗖 S Import	
GET http://dev.kooki.co/ws/webresources/authorgeography? t=1cdf8a718711313a9e82efc69	No Auth 🗸	History Collections		No environment ~ 😰
GET http://dev.kooki.co/ws/webresources/affinity? t=1cdf8a718711313a9e82efc6915861bf	Body Cookies Headers (6) Tests (0/0) Status 200 OK Time 281 n	Add to collection	GET V http://dev.kooki.co/ws/webresources/search?t=1cdf8a718711313a9e82efc6915861bf6 Pa	rams Send V
GET http://dev.kooki.co/ws/webresources/author? t=1cdf8a718711313a9e82efc6915861bf&q	Pretty Raw Preview JSON   필	Today GET http://dev.kooki.co/ws/webresources/search? +=1cdf8a718711313a9a82afc6015861bf6a	Authorization Headers (0) Body Pre-request script Tests	
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t=1cdf8a718711313a9e82efc6915861bf&q GET http://dev.kooki.co/ws/webresources/summary? t=1cdf8a718711313a9e82efc6915861bf&	<pre>5 - "companys" "companys resource", 5 - "companys": "https://pbs.twimg.com/profile_imag 7 "company": "Heliacorp Pte Ltd", 8 "context": "mediacorp crawler".</pre>	e t=1cdf8a718711313a9e82efc69 GET http://dev.kooki.co/ws/webresources/adfinity?	Body Cookies Headers (6) Tests (0/0) Status 200 OK Time 987 ms	
	9 "about": "Mediacorp Pte Ltd, better known a 10 } 11 }	s t=1cdf8a718711313a9e82efc6915861bf GET http://dev.kooki.co/ws/webresources/author?	Pretty Raw Preview JSON V 3	ū q
	** ]	t=1cdf8a718711313a%e82efc6915861bl6q CET http://dev.kookic.of/wsivebresources/trend? t=1cdf8a718711313a%e82efc6915861bl6q= CET http://dev.kookic.ov/wsivebresources/summary? t=1cdf8a718711313a%e82efc6915861bl6	1 * [ "kooki-search": {	mediacorp\"\"]".
			2 youtube-an-1.me: 1.88, 1 facebook-b:ime: 1.20 31 'data': { 22 'instagram-data': [	
			33. 4. "user-name": "asianstarsid", 55. "content": "Shiseido Professional Beauty Innovator Awards 2015 - Chri 36. "id": "1134571340635560937_2078756465", 37. "sentiment": "neu".	s Tong: DVF Agent Farrah Em
	1		<pre>58</pre>	
			<pre>7* { 43</pre>	s Tong: DVF Arabella Tie Ne
			<pre>serilment: rmus , 2015:12-07 14:57:03.0*, "user-id': "20275/665", "projugation: "20275/665", "projugation: "20275/665", "projugation: "20275/665", "serilment: "20275/665", "user-realmant": "Asian Stars ID' 51</pre>	✓ Scroll to response

## Text Analytics API

• • •			
Q Search	Builder Runner - D Import	😵 🙆 in Sync 🛛 🗰 🗭 🐨	
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GET http://dev.kooki.co/ws/webresources/trend? t=1cdf8a718711313a9e82efc6915861bf&q=	Authorization Headers (0) Body Pre-reques	Q Search Builder Runner L D Import	🚫 In Sync 🛛 Wee 🗸 🕑 💟
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GET http://dev.kooki.co/ws/webresources/searchcontext? t=1cdf8a718711313a9e82efc69158		Today GET	Send V O V
GET http://dev.kooki.co/ws/webresources/authorgeography? t=1cdf8a718711313a9e82efc69	Body Cookies Headers (a) Tests (0/0) Status 200 OK Time 23/5 m	t=1cdf8a718711313a9e82efc6915861bf Authorization Headers (0) Body Pre-request script Tests	
GET http://dev.kooki.co/ws/webresources/affinity? t=1cdf8a718711313a9e82efc6915861bf	Pretty Kaw Preview JSON = I	t=1cdf8a718711313a9e82efc6915861bf&q=No Auth V	
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Gr http://dev.kooki.co/vs//vebresources/summary? t=1cdf8a718711313a9e82efc6915861bf6	<pre>12. "facebok-trend": [ 13. "facebok-trend": [ 14. " 14. " 15. "cluster: [ 15. "cluster: [ 16. "cluster: [ 17. "beta cluster: [ 17. "document": "his sum up our happend 17. "document": "new "document": "new "document": [ 17. "document": "new "document: "new "document": "new "document: "</pre>	G1       mtp://dev.kook.cos/www.meresources/selectoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf83718711313s%cdcoritist: t=1cdf8371871131s%cdcoritist: t=1cdf83718711513s%cdcoritist: t=1cdf83718711515s%cdcoritist: t=1cdf83718711515s%cdcoritist: t=1cdf8371871151	☐ Q iacorp\"\"]",
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**S** 

# Influencer Analytics API

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		History Collections	http://dev.kooki.co/	No environment 🗸 🗴
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		GET http://dev.kooki.co/ws/webresources/author?	Authorization Headers (0) Body Pre-request script Tests	
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Add to collection	GET v http://dev.kooki.co/ws/webresources/affinity?t=1cdf8a718711313a9e82efc6	GET http://dev.kooki.co/ws/webresources/search? t=1cdf8a718711313a9e82efc6915861bf&q	Body Cookles Headers (6) Tests (0/0) Status 200 OK Time 206 ms	
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GET http://dev.kooki.co/ws/webresources/author? t=1cdf8a718711313a9e82efc6915861bf&q	No Auth 🗸	t=1cdf8a718711313a9e82efc6915861bf& GET http://dev.kooki.co/ws/webresources/searchcontext?	1 * 【 2 * "kooki-author": { 3 * "kooki": "Matched context: [\"\"新传媒私人有限公司\"\",\"\"新传媒\"\",\"\"新传媒\"\",\"\"	\"\"]",
<ul> <li>Thtp://dev.kooki.co./www.besources/tend?</li> <li>Thtp://dev.kooki.co./www.besources/search?</li> <li>Tot./for./for.kooki.co./www.bebresources/search?</li> <li>Tot./for.kooki.co./www.bebresources/search?</li> <li>Tot./for.kooki.co./www.bebresources/search?</li> <li>Tot./for.kooki.co./www.bebresources/search.</li> <li>Thtp://dev.kooki.co./wwb.bebresources/search.</li> <li>Thtp://dev.kooki.co./wwb.bebresources/search.</li> <li>Tot./for.kooki.co./wwb.bebresources/search.</li> <li>Thtp://dev.kooki.co./wwb.bebresources/search.</li> <li>Thtp://dev.kooki.co./wwb.bebresources/search.context?</li> <li>tot.for.kooki.co./wwb.bebresources/search.context?</li> <li>tot.for.kooki.co./wwb.bebresources/search.context?</li> <li>tot.for.kooki.co./wwb.bbs.cov/wbbs.cov/search.context?</li> <li>tot.for.kooki.co./wbbs.cov/search.context?</li> <li>tot.for.kooki.co./wbbs.cov/search.context?</li> <li>tot.for.kooki.cov/wbbs.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for.kooki.cov/search.context?</li> <li>tot.for</li></ul>	Body Cookes Headers(6) Tests(00) Status 200 OK Time 90ms Pretty Raw Preview JSON 通 ** { ** Cookes Headers(6) Tests(00) 通 ** Cookes JSON 通 ** Cookes Headers(6) Tests(00) 通 ** Cookes JSON Marking ** 可当*********************************	t-1cdf8a718711313a9e82efc69158	<pre>* "time: { * twitter-db-time": 153 } duta": { * twitter-author": [ * "eal-name": "88K0 H A H H H * Steen-name": "88K0 H A H H * Steen-name": "88K0 H A H H * Steen-name": "4259383" * "old: the steen h * "steen-name": "4259383" * "image-url: "thtp://bb.twing.com/profile_images/679023509/R8K0logo-revised01 * "posts-count": 2 * "steen-name": "glambertist", * "claname": "steen h * "steen-name": "glambertist", * "claname": "glambertist", * "steen-name": "glambertist", * "steen -name": "glambertist", * "steen -name": "glambertist, * "steen -name": "glambertist, * "steen -name": "glambertist, * "steen -name": "glamb</pre>	sq.gif", jpg". yscroll to response

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