UB RESEARCH

Quarterly OLED Emitting Material Market Tracker Sample 20, 2024

Analyst Junho Kim

alertriot@ubiresearch.com Website : www.ubiresearch.com

Table of Contents

1.	Reference Guide	3
2.	Sales	4
3.	Supply Volume	18
4.	Sales Forecast	32
5.	Usage Forecast	44

Reference Guide

Application Covered

- Smartphone
- TV

Nation Covered

- Korea
- China

Function Covered

- CGL: n-CGL
- CPL
- Dopant: R, G, B, YG
- ETL: EIL, ETL, aETL
- Host: R, G, B, YG
- HTL: HIL, HTL, P+, RGB Prime

Structure Covered

- RGB OLED
- WRGB OLED
- QD-OLED
- RGB 2stack OLED

Actual and Forecast

- Quarterly update
- History : 3-year, Forecast : 5-year

Unit

- Revenue : US\$ millions
- Volume : ton

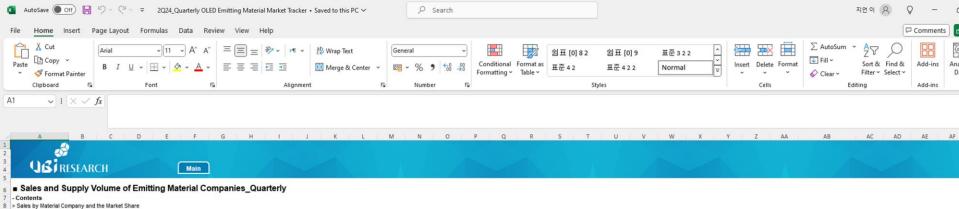
Sales

- Total
- By Nation
- By Company
- By Layer
- By OLED Structure
- By Purpose
- By Material

× A	autoSave Off	- 9 · C	⊽ ⊋ 2Q24_Quarterly (DLED Emitting Materia	al Market Tracker	 Saved to this I 	PC ∽	2) Search]						지언 이	8	Ş —	Ć
File	Home Insert	Page Layout	Formulas Data	Review View H	Help															F	⊐ Comment	s 🕻
Paste		Arial B I	->[11 ->] A^ ⊔ -> ⊞ -> <u>A</u> -> <u>A</u>		≫~ × × ×	eb Wrap Text		General	9 €0 .00	Conditional Formatting	Format as Table Y	쉼표 [0] 8 2 표준 4 2	쉼표 [0] 9 표준 4 2 2	표준 3 2 2 Normal	× •		Delete Forma	∑ AutoSum ↓ Fill ~ ♦ Clear ~	Z U Sort &	Find & Select ~	Add-ins	Ani D
		Г <u>ы</u>	Font	F2	Alignmen	nt	L7	Nun	nber	F <u>u</u>		S	tyles				Cells		Editing		Add-ins	
A1	→ : × ×																					
			E F G	HI	JK		M	0	ų	Q R	5	I U	V W	X	Y Z	. AJ	A AB	AC AD	AE	AF	AG	AH
4 5 6 7	AMOLED E		erial Market Track																			
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18	> Remarks > Average Sales I > Sales Sales and Supply PIVOT Quarterly S PIVOT Quarterly S PIVOT Quarterly S > Forecast PIVOT Sales Fore PIVOT Usage Fore > www.ubiresearch	Volume of Emittin iales iupply Volume cast icast	laterials_Q n Material Companies_Q																			
21 22 23 23 24 2. Th 3. Th 4. Th	is file is published by UBI RE is file is available for buyers is file is disclose-able with th	only, if not, he or she e consent of UBI RES	shall compensates ten times of the SEARCH. g, copying, and binding are govern		ation of the copyright.																	
27 28 29 30 31 32 33																						
25 26 27 28 30 31 32 33 34 35 36 37 38 39 40 40 41 42																						
41 42 <	> Main	Remarks	ASP_Q Material C	ompanies' Perf_Q	PIVOT Qua	arterly Sales	PIVOT_O	arterly Sur	oply Volume	PIVOT Sale	es Forecast	PIVOT Usad	ne Forecast	+				:	•			_
					- Club	July balled		Sup			- or coust											

Ħ

🔕 AutoSave 🔘 Off) 📙 🤌 - 🖓 - = 2024_Quarterly OLED Emitting Material Market Tracker • Saved to this PC 🛩	♀ Search			지언이 🔗 💡 — 0
File Home Insert Page Layout Formulas Data Review View Help				🖓 Comments
	General General Conditional Format as Formating Number S	쉽표 [0] 8 2 쉽표 [0] 9 표준 4 2 표준 4 2 2 Styles	표준 3 2 2 Normal 한 Cells	Format ∑ AutoSum ~ Av Clear ~ Art
A1 \sim : $\times \checkmark f_x$ A B C D E F G H I J K L M N O P			AB AC AD AE	AF AG AH AI AJ AK AL
A B C D E F G H I J K L M N O P 2 3 4 5 Main	P Q R S T U V	W X Y Z AA	AB AC AD AE	AF AG AH AI AJ AK AL
Average Sales Price of Emitting Materials Contents ASP of Emitting Materials ASP of Longian Materials ASP of Longian Materials ASP of Common Layer Materials ASP of Longian Materials				
13 > ASP of Emitting Materials		(\$/g)		
14 Items 1Q18 2Q18 3Q18 4Q19 1Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q21 15 Red Hoat 16 Red Dopant 17 Green Dopant 18 G0reen Dopant 19 Blue Dopant 20 Blue Dopant 21 ELL 22 ELL 23 ETL 24 HIL 25 HTL 26 MTL 27 Rr 28 Gr 29 Br	21 4021 1022 2022 3022 4022 1023 2	<u>923</u> <u>3923</u> <u>4923</u> <u>1924</u>		
31 > ASP of Host Materials		(\$/g)		
32 1Q18 2Q18 3Q18 4Q19 1Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q2 33 Red Host Green Host S Blue Host Blue Host S	21 4021 1022 2022 3022 4022 1023 2	Q23 3Q23 4Q23 1Q24		
ASP of Host Materials				
39 40 41				
	arterly Supply Volume PIVOT Sales Forecast	PIVOT Usage Forecast	+	: •
Ready 🛱 Accessibility: Investigate				▦ ▥ — —



> Sales by Company and the Market Share

1Q18 2Q18 3Q18

4Q18

Company

Solus DuPont Duksan Neolux LT Materials Idemitsu Kosan JNC LG Chemical Merck Novaled NSSC Samsung SDI SFC Toray Tosoh UDC Hodogaya etc Total

Ratio

9 > Supply Volume by Material Company and the Market Share

Sake two the function company	10	19100 10 100 0 510	120																						1125733	151 (33) Wei
Sudu DuPoint DuPoint Nor Userselux It Netridial Isensidu Nor UC Centroll Mede Mede Norse Samuag S01 SFC Sro Tosh Tosh Tosh Tosh Statistical Statistical	1 >									-			Y	-		-	-		_				-			
Dubel Duban Necku T. Marina Dismus Kann Roma Dismus Kann	F		1Q18	2Q18	3Q18	4Q18	1Q19	2Q19 30	Q19	4Q19 1	20 2020	3Q20	4Q20	1021	2021	3Q21	4Q21	1022	2022	3Q22	4Q22	1023	2023	3Q23	4Q23	1Q24
Dube heiden T Mereide Tenent Mowied Mowied Mowied Mowied Mowied Mowied Mowied T Gray T G Gray T Gray T Gray T G																										
IT Markins Verkinskinskinskin NC Nordel Nordel Merkinskinskinskinskinskinskinskinskinskins	-		-																							-
jeening No G. Cennal News News News News News News News News	-																									
WC LG Chemidal Merak Novalde NSSC SR SFC Tray Tosh UOC Volde	-																									
LG Chemical Merida Movaled NSSC Semunung SDI SFC Toray Tor																										-
Merk Nosid NSSC Samung S01 SFC Toray Tokeh UOC UOC UOC UOC UOC Nodegaya etc Tokal Tokal	+																									
Noted Noted Semung SDI SFC SFC Tony Tooh UDC Hodgays tbc tbc Total Sales by Company	F																									
semsung SDI SFC Torey Torey Torey OUC Nodogaya etc Total	F		t																							1
SPC Torsy Torsy UDC Wodogaya etc Total Sales by Company * Sales	+	NSSC	1																							1
Torky Tork Tork UDC Hodogaya etc Total Sales by Company Sales by Company <td>E</td> <td>Samsung SDI</td> <td>1</td> <td></td> <td>1</td>	E	Samsung SDI	1																							1
Tosch UCC Hodogaya etc Total	C																									
UDC Hodgaya etc Total	L																									
Hodogaya etc Total Sales by Company Sales by Company Sales by Company Solus Urbort Dubsan Neokox LT Materials Identisui Kosan NC LG Chemical Marin Remarks ASP_Q Material Companies' Perf_Q PVOT Quarterly Sales PIVOT Quarterly Supply Volume PVOT Sales Forecast PVOT Usage Forecast +	L																									
ec Total Sales by Company PUCP dual refusion No Sales by Company PUCT Quarterly Sales PUCT Quarterl	L																									
Total Total Sales by Company	-																									
Sales by Company Sales by Company PlyOT Usage Forecast +	-																									
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Sales Forecast PIVOT Sales Forecast PIVOT Sales Forecast PIVOT Usage Forecast +	-	rotal	1																							
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Sales Forecast PIVOT Sales Forecast PIVOT Sales Forecast PIVOT Usage Forecast +								2.2	3 2																	
 Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast 								Sales	s by Cor	npany																
 Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast 	1														= 5	olus										
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +	5																									
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +	5																									
Solution Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +	1 2 3 4 5 5 5 5 7 7 8 8 9 9 0 1 1 2 2																									
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +	5	coll							1.11			1.0		- A. L			an									
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +		in s					-						1.4													
Novaled N		S																								
Main Remarks ASP_Q Material Companies' Perf_Q PIVOT Quarterly Sales PIVOT Quarterly Supply Volume PIVOT Sales Forecast PIVOT Usage Forecast +																										
		-													= N	ISSC										
1 the Arcaschilithe Investigate		< > N	/lain R	lemarks	ASP_Q	Mate	erial Com	npanies' Per	rf_Q	PIVOT Qu	arterly Sale	s PIVC)T Quarte	rly Suppl	y Volume	PIV	OT Sales	Forecast	PIVC)T Usage	Forecas	t	+			
		dy 😤 Accessibili	ity: Investig	ate									_													

Save Off	1 9 - 9 -	≂ 2Q24_C	uarterly OLED	Emitting Mate	erial Market Tr	acker • Saved	I to this PC \sim			arch											지언 이	8 8	-	ć
ome Insert	Page Layout	Formulas	Data Revi	ew View	Help																	P	Comments	5
{ Cut ∄ Copy → ダ Format Painter pboard	Arial B I L		× <u> </u>	EEE	<u>+=</u> ==	E N		_	1.11	- - - - - - - - - - - - - - - - - - -	Conditional Formatting ~	Format as Table ~			_		4 4	Insert D	elete Format	👽 Fill 🛩	Z U Sort &	Find &	Add-ins	Ana
• : × <	fx																							
₿ B B B I B I B I RESE/		E F	G Main	н т	л к	L I	M N	0	P Q	R	S T	U	v w	X Y	Z	AA A	AB J	AC A	AD AE	AF	AG AH	AI	LA	A
5		lume_Quart	erly																					
on (AII) - (AII) - (AII) -																								
kg • 1Q18	2Q18 3Q18	4Q18 1Q19	2Q19 3Q1	19 4019 :	1Q20 2Q20) 3Q20 4	IQ20 1Q21	2021 30	21 4021	1022 20	022 3022	4022 1	Q23 2Q23	3Q23 4Q23	1024									
ay y																								
Display								R																
play																								
	Insert Cut Cut Copy ~ Format Painter board Format Painter board Format Painter board Format Painter board Format Painter board Format Painter board Format Painter board Format Painter Copy ~ Format Painter Copy ~ Format Painter Copy ~ Format Painter Copy ~ Format Painter Copy ~ Format Painter Copy ~ Copy ~ C	me Insert Page Layout Cut Arial Copy \sim Format Painter Iboard Su \sim : $\sim fx$ B C D C D C D C D C D C D C D C D	me Insert Page Layout Formulas Cut Arial 11 Copy \sim Format Painter B I $\vee = + <$ B C D E F Comment Painter Font B C D E F Comment Painter Font B C D E F Comment Painter Font B C D E F Comment Painter Font Comment Painter Font	me Insert Page Layout Formulas Data Revi Cut 1 Copy ~ Format Painter board Fs B C D E F G B C D E F G C C C E F G C C E F G C C C E F G C C E F G C C C E F G C C C E F G C C C E F G C C C C C C C C C C C C C C C C C C	me Insert Page Layout Formulas Data Review View Cut $1 \text{ Copy} \rightarrow$ Format Painter 1 B $I \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv =$ $1 \cup \neg \bigcirc \land \land \land = \equiv =$ $1 \cup \neg \bigcirc \land \land \land = =$ $1 \cup \neg \bigcirc \land \land \land = =$ $1 \cup \neg \bigcirc \land \land \land = =$ $1 \cup \neg \land \land \land = =$ $1 \cup \neg \land \land = =$ $1 \cup \neg \land \land \land \land = =$ $1 \cup \neg \land \land \land = =$ $1 \cup \neg \land \land \land \land = =$ $1 \cup \neg \land \land \land \land = =$ $1 \cup \neg \land \land \land \land = =$ $1 \cup \neg \land \land \land = =$ $1 \cup \land \land \land \land \land = =$ $1 \cup \land \land \land \land \land = =$ $1 \cup \land \land \land \rightarrow =$ $1 \cup \land \land \land = =$ $1 \cup \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \land \land \land \rightarrow =$ $1 \cup \land \land \land \land \land \land \land \land \rightarrow =$ $1 \cup \land $	me Insert Page Layout Formulas Data Review View Help Cut 1 Copy \sim Format Painter board 5 B I U \sim \square \sim \square	me Insert Page Layout Formulas Data Review View Help Cut Cut Cut Copy ~ Format Painter board r_5 B I U ~ U ~ A ~ F \equiv	Cut 1^{Copy} Format Painter Format Painter 1^{Copy} Format Painter 1^{Copy} Format Painter 1^{Copy} Format Painter 1^{Copy} Fort 1^{Copy} Fort 1^{Copy} 1^{Copy} Fort 1^{Copy}	ame Insert Page Layout Formulas Data Review View Help Cut Image: Arial Image: A	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	me insert Page Layout Formulas Data Review View Help Cut 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	$\frac{me}{1000} \text{ Isset Page Layout Formulas Data Review View Help}$ $\frac{Cut}{10000} = \frac{1000}{10000} + \frac{1000}{10000} + \frac{1000}{10000} + \frac{10000}{10000} + $	Imme Insert Page Layout Formulas Data Review View Help Cut Imat Im	me Insert Page Layout Formulas Data Review View Help Cut (Copy + (Format Painter) Arial + B I<	me Insert Page Layout Formulas Data Review View Help Cut Joopy Image Image	Insert Page Layout Formulas Data Review View Help Cut (Sopy) Inial III A A A E E E E A A A E E E E A A A E	Imme Insert Page Layout Formulas Data Review View Help Cot Cot Image Insert Image Insert	me insert Page Layout Formulas Data Review View He Cot Image Image	mme insert Page Layout Formulas Data Review View Hep Cut Image Image <t< th=""><th>me inset Page Layout Formulas Data Review View Heip Cut Cut Image A Image Image</th><th>Image insert Page Layout Formulas Data Review Weep States Stat</th><th>Image layout Formulas Data Review View Help Cut Image layout Formulas Data Review View Help Cut Image layout Formulas Image la</th><th></th><th>Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review Formula Image Insert Page Layout Formula Data Review Formula<</th></t<>	me inset Page Layout Formulas Data Review View Heip Cut Cut Image A Image Image	Image insert Page Layout Formulas Data Review Weep States Stat	Image layout Formulas Data Review View Help Cut Image layout Formulas Data Review View Help Cut Image layout Formulas Image la		Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review View Help Image Insert Page Layout Formulas Data Review Formula Image Insert Page Layout Formula Data Review Formula<

🚺 AutoSave 🔵	off 📙	9- 9	~ ⊽ 2Q	24_Quarterly O	LED Emitting M	aterial Mark	et Tracker •	Saved to this PC	~	2	O Search)							지언이 8	2 0	-	d
File Home	Insert I	Page Layout	t Formula	s Data F	Review View	Help																	P	Comments	s 🕑
Paste Cut Paste S Form Clipboard	nat Painter			<u>11</u> → A^ A - <u> </u>	× ≡ ≡ × ≡ ≡	≡ = 3		않 Wrap Text 던 Merge & Cen			9 €00 →	Conditiona Formatting	I Format as Table ~		쉽표 [0] 9 표준 4 2 2 yles	표준 3 2 2 Normal	< >	Insert v	Delete Fo	rmat 🖳	AutoSum Fill ~ Clear ~ Ed	Y AZY Sort & Filter → S		Add-ins	Ana
A1 ~	I × ~	fx																							
A	В	0	- 1	D	E	F	G H	1		J		к		L	М	N O	Р	Q	R	S		т	U	v w	x
	🔗 RESEAR	КСН		Main	ן																				
6 Emitting I 7 - Contents 8 > Pivot of Yearly Si			ales Fore	cast																					
9 10 Nation 11 Layer 12 Application 13 OLED Method 14 Material	(AII) (AII) (AII) (AII) (AII)	* * * * * *																							
15 16 17 Company	US\$ million 2024	2025	2026	2027	2028																				
18 BOE 19 CSOT 10 Everdisplay 12 LG Display 23 Transa 24 Visionox 25 Grand Total 26 27 28 29 20 21 22 23 24 25 Grand Total 26 27 28 29 30 31 32 33 34 35 36 37 38 39 41	γ		11-11-11	Taxa and a second	11111	Berlin of																			
40	Main	Pamarka	ASP O	Matorial Co	amanias' Bar		MOT Quest	terly Sales 🚺 F		torby Su	nnh Volumo	PIVOT Sa	es Forecast	PIVOT Usag	Lo Foregast	+								_	
	Wain	Remarks	ASP_Q	Waterial Co	impanies Per		vo i Quan	terry sales	nvor Quan	teny su	pply volume		es i orecasi	Pivor Usag	e Forecast	Ŧ						-		_	

🗴 AutoSave ●Off) 📙 り < 🤆 🗢 2Q24_Quarterly OLE	.ED Emitting Material Market Tracker $ \cdot $ Saved to this PC $ \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $	₽ Search		지연이 용 오 - 0
File Home Insert Page Layout Formulas Data Re	eview View Help			🖓 Comments 🛛 🖉
Paste $\overset{\frown}{\checkmark}$ $\overset{\frown}{\checkmark}$ Format Painter $\overset{\frown}{\checkmark}$ $\overset{\frown}{\checkmark}$ $\overset{\frown}{\checkmark}$ $\overset{\frown}{\frown}$			임표 [0] 8 2 임표 [0] 9 표준 3 2 2 표준 4 2 표준 4 2 2 Normal ♥ Styles	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
[A1				
A B C D E F G	H I J K	L M N	O P Q R S T	U V W X Y Z AA
Emitting Materials Market Sales Forecast -contents Prvot of Yearly Usage Forecast				
9 J 10 Nation 11 Layer 12 Application 13 OLED Method 14 Material 15				
kg 17 Company v 2024 2025 2026 2027 2028 18 80E 19 CSOT 20 Everdisplay 1 GDisplay				
22 Samsung Displa 23 Tianma 24 Visionox 25 Grand Total				
26 27 28 29 30 31 32 33 34 35 56 37 38 39 40 41				
83 84 85 86 37				
42				
< > Main Remarks ASP_Q Material Con	mpanies' Perf_Q PIVOT Quarterly Sales PIVOT Quar	arterly Supply Volume PIVOT Sales Forecast	PIVOT Usage Forecast +	: •