

# How TI APIs can modernize your supply chain

Learn how integrating with TI APIs can modernize your business and automate how you do business with TI.

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# Meet our speakers



## Max Merkovitz

- Area Director - Sales and Applications
- 10 years at Texas Instruments
- B.S. in Electrical Engineering from the University of Southern California



## Laura Shuey

- eCommerce Marketing Manager
- 12 years at Texas Instruments
- B.S. in Electronic Engineering Technology from Texas A&M

# Today's agenda

Why API

TI APIs

API use cases – sparking inspiration

Where to get help & what's coming next

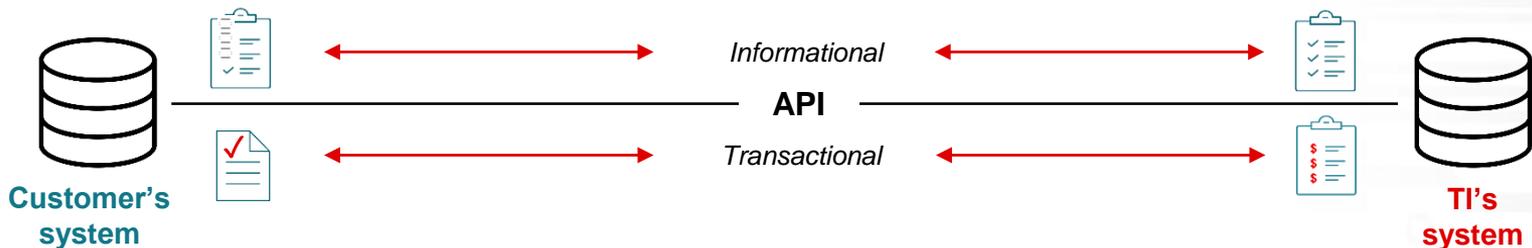
Questions

# What are APIs?

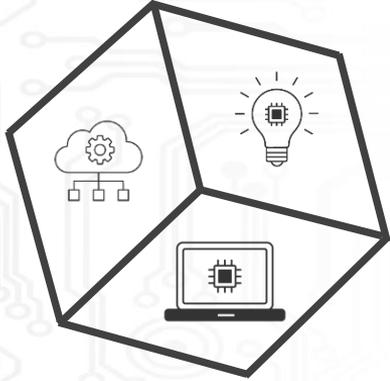
API stands for **Application Programming Interface**, which is an interface that allows two systems or applications to talk to each other to access data.

TI APIs:

- Help simplify complex information in a way that's tailored to your needs.
- Offer an environment for delivering informational and transactional data in a way that's most suited to your business needs.



# Why API? **Fast & convenient**



**Integrate data directly in your system**



**Receive automated & real-time data**



**Make business decisions faster**



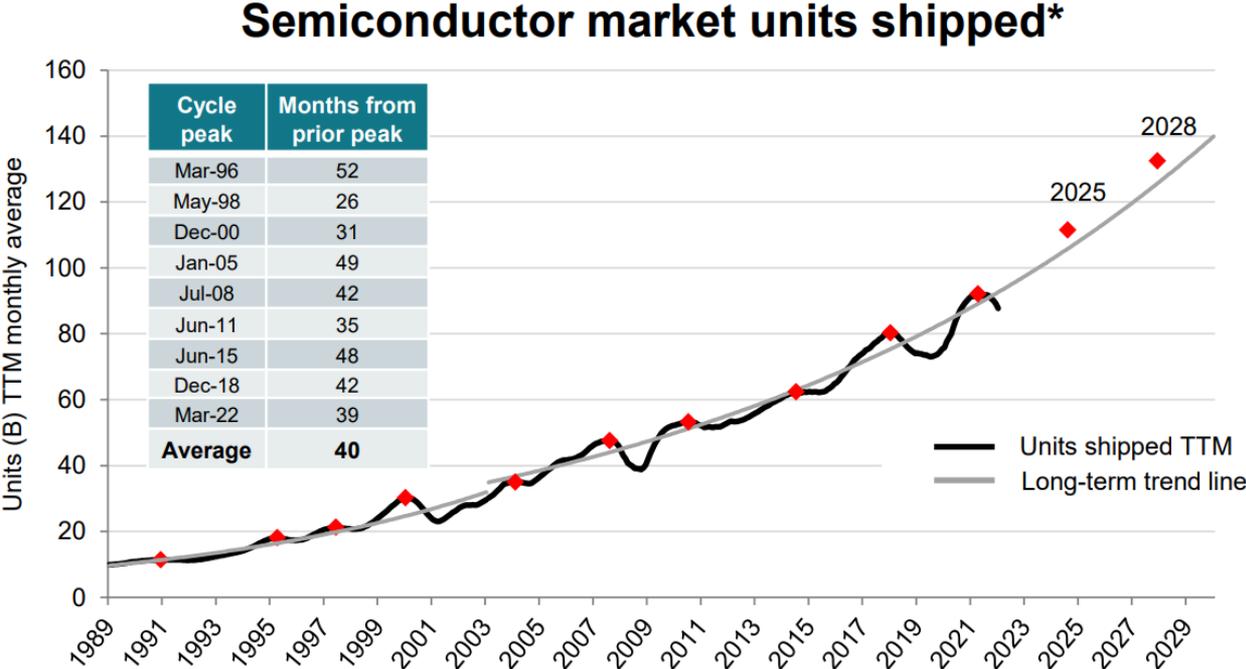
**Increase efficiency**



**Easily buy directly from your material planning system**



# Semiconductor cycles plan for the long term



\* Source: WSTS excluding memory trailing twelve months

# New 300-mm wafer fabs support 10 to 15 years of growth

## RFAB2: Richardson, Texas



- RFAB2 production underway.
- Tool installations continue as we ramp over the coming months.

## LFAB1 & LFAB2: Lehi, Utah



- LFAB production underway.
- Construction on LFAB2 beginning in 2H23; production as early as 2026.

## SM1-4: Sherman, Texas



- Construction of SM1 & SM2 underway.
- Production from SM1 in 2025.

45-nm to 130-nm process technology nodes, optimal for our analog and embedded products

# Expanding assembly and test capacity ahead of demand

## CDAT2 – Chengdu, China



- Expansion started in 2018.
- Tool installations underway as planned.

## TIEM2 – Melaka, Malaysia



- New assembly/test, probe and bump facility will connect to existing assembly/test site (TIEM1).
- Construction underway, with first production expected as early as 2025.

## TIM2 – Kuala Lumpur, Malaysia



- New assembly/test facility will connect to existing assembly/test site (TIM1).
- Building purchased. Construction to begin this year, with first production expected as early as 2025.

# TI store API suite

Inventory & pricing API

Inventory subscription API

Order API

Advanced shipment notice API

Financial document API

1



Request TI parts

2



Receive TI inventory

3



Take action

# TI store API suite

Inventory & pricing API

Inventory subscription API

Order API

Advanced shipment notice API

Financial document API

1



Subscribe to list of TI parts with quantity

2



Receive notification

3



Buy

# TI store API suite

Inventory & pricing API

Inventory subscription API

Order API

Advanced shipment notice API

Financial document API

1



Send order

2



TI parts delivered

# TI store API suite

Inventory & pricing API

Inventory subscription API

Order API

Advanced shipment notice API

Financial document API

1



Place order

2



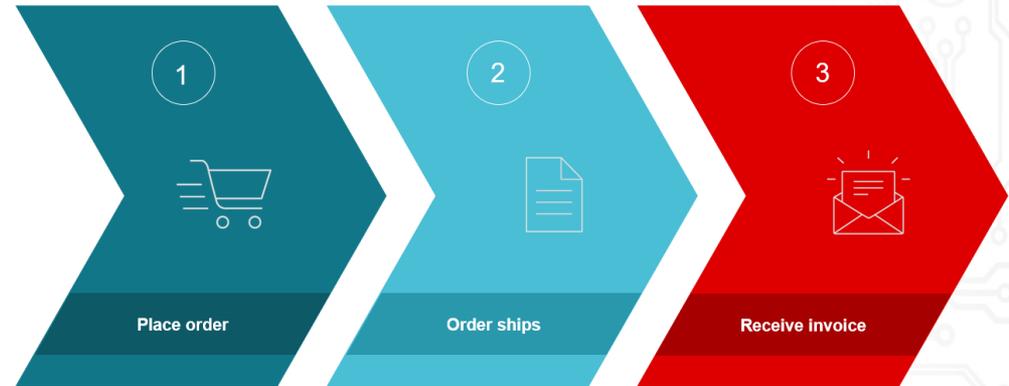
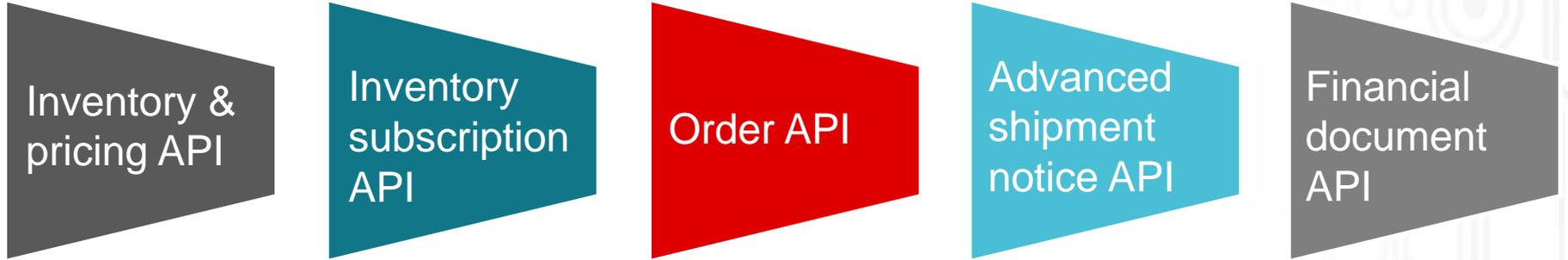
Order ships

3



Receive tracking details

# TI store API suite



# TI product information API

## Product information

Identifier	
LM2901DR	
Description	
30-V quad differential comparator	
GenericProductIdentifier	
LM2901	
Url	
https://www.ti.com/product/LM2901	
ProductFamilyDescription	
Comparators	
DatasheetUrl	
https://www.ti.com/lit/gpn/LM2901	
LifeCycleStatus	
ACTIVE	
LeadTimeWeeks	
6	
FullBoxQty	2500
MinOrderQty	2500
NextIncrementQty	2500
StandardPackQty	2500
OkayToOrder	TRUE
Obsolete	FALSE
LifetimeBuy	FALSE
ChangeOrderWindow	
STD	
ExtendedShelfLife	
FALSE	
ExportControlClassificationNumber	
EAR99	
HtsCode	
8542390001	
MilitaryGoods	
FALSE	

## Parametric information

Identifier	Type	Value	Unit	UnitDescription
LM2901DR	Operating temperature range	-40 to 125	°C	Degree Celsius
LM2901DR	TI functional safety category	null		
LM2901DR	Iq per channel	0.2	mA	Amperes
LM2901DR	Input bias current (±)	250	nA	Amperes
LM2901DR	Rating	Catalog		
LM2901DR	Rail-to-rail	Out		
LM2901DR	Output type	Open-collector		
LM2901DR	Vos (offset voltage at 25°C)	7	mV	Volts
LM2901DR	VICR	0 to 28.5	V	Volts
LM2901DR	Features	Standard comparator		
LM2901DR	Vs	2 to 30	V	Volts
LM2901DR	Propagation delay time	1.3	µs	Seconds
LM2901DR	Number of channels	4		

## Quality information

Identifier	AutomotiveQualification	CommodityGroup	DieSize	DefectivePartsPerMillion	FailuresInTime	MeanTimeBetweenFailures	ProcessTechnology
LM2901DR	FALSE	Not Available	Not Available	56	0.6	1590000000	Not Available

# Order entry | Find & buy many parts, faster

Create order in ERP



Pricing and inventory API



Order API to fulfill order



Customer places a purchase order in their system of choice and the purchase order is automatically transmitted to TI via API.

The benefit of this model is that:

- The customer can order multiple parts through one request of Order API.
- Faster ordering time – vs manually one by one on TI.com.

# Demand forecast | Automate buying when you need

Forecast demand



Supply to demand match



Inventory & pricing API  
Inventory subscription API



Order API



Customer implements the inventory and ordering APIs in the supply/demand system to automatically monitor when new supply is needed and/or when inventory becomes available and the system automatically triggers an order via API when new supply is needed.

The benefit of this model is that:

- Most purchasing can be automated.
- The customer can focus on exceptions.
- The customer can forecast the inventory based on demand and order when convenient.

# Safety stock | Identify & fill supply gaps

Identify low stock threshold



Inventory & pricing API  
Inventory subscription API



Order API to restock



The customer sets internal inventory targets and monitors TI's inventory levels.

When internal inventory falls below a threshold, an order is automatically triggered to replenish supply to get up to target levels, through Order API.

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The benefit of this model is that:

- Purchasing and documents can be automated.
- The customer can purchase inventory to maintain desired stocking levels.

# Parametric data | Reduce manual effort

Product information API



Retrieve parametric data



Data for AVL addition loaded in ERP



Customer requests TI parts information through Product information API. TI sends select parametric data for the TI parts, with basic paging and filtering capabilities.

The data will automatically be loaded into the customer's system and can be easily added to their approved vendor list.

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The benefit of this model is that:

- The customer retrieves parametric data for multiple parts in bulk.
- Obtaining data is faster – vs manually researching on TI.com or sending emails.
- TI sends data direct to customers system.

# Leadtime (LT) data | Buy fast when market shifts

Product information API



Track LT over time



When observe a LT spike, Order API



Utilizing our product information API, track our LT trends. When you see a spike, be ready to place an order right away.

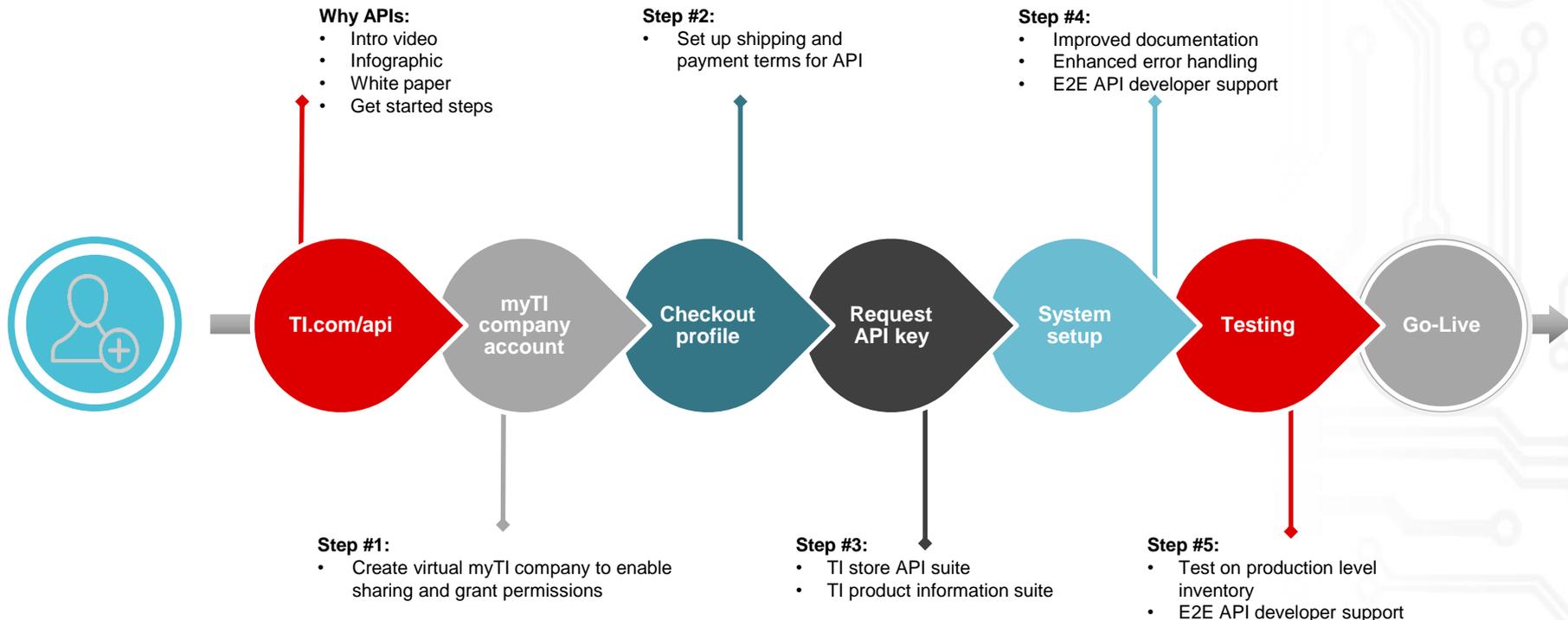
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The benefit of this model is that:

- Be ready when the market adjustment happens again.
- TI sends data direct to customers system.

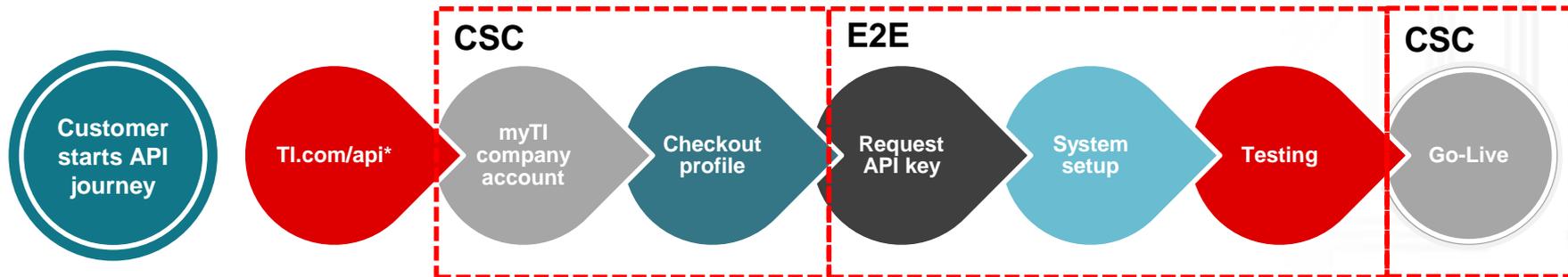
# TI store API suite | API connection journey

These are the steps, actions and details to take to implement our TI store API suite.



# Support & resources

TI teams/channels that will assist the customer at each phase of the API connection journey.



For all of the steps above, along with our support teams, our resources include:

- API developer portal
- Step-by-step guides
- Training videos \*coming soon\*
- E2E forums
- Email notices with updates
- FAQs on TI.com

# What's next? | Cross-reference API

1

Customers can upload their entire bill of materials



Request

2

TI will send our cross reference devices with the TI price



Receive

3

Customers can check for inventory and purchase



Action

# What's next? | Enhanced myTI dashboard

- Centralized area that shows useful order and account information
- Improved clarity to the onboarding process through guided tasks
- User friendly navigation, for customers to quickly find and access tools and other resources

The screenshot shows the myTI dashboard for a user named Matt. The top navigation bar includes the Texas Instruments logo, a search bar, and links for Matt, English, United States, and USD. A secondary navigation bar lists categories: Products, Applications, Design resources, Quality & reliability, Support & training, and About TI. The main content area features a user profile for Matt with a 'Change account' link and a 'Notifications' button. A sidebar on the left contains a navigation menu with sections: Company account, Ordering, Personal settings, and Tools & resources. A central banner promotes 'Seamless collaboration with colleagues' with a 'Learn more' button. Below this is a 'myTI account tasks' section with a progress indicator showing 40% completion. The tasks include 'Create an address' (Required) and 'Create a checkout profile' (Required), each with a 'Create' button.

The screenshot shows the 'Orders' section of the dashboard. It features a 'Recent' tab and a table of recent orders. Below the table is a 'View all' link and a grid of six resource cards.

Date ordered	Order number	Order entry	PO reference number	Status
14 Aug 2023	T03	T1.com	000	Compliance review
14 Aug 2023	T03	T1.com	000	Compliance review
14 Aug 2023	T03	T1.com	000	Compliance review
14 Aug 2023	T03	T1.com	000	Compliance review
14 Aug 2023	T03	T1.com	000	Compliance review

View all

- Material attribute search**: Search or upload a list of parts for up to date details regarding part information.
- Cross-reference search**: Efficiently search or upload multiple competitor parts to confirm availability and
- My designs**: Find your saved designs and models in one place.
- TI DevTools**: Access all the development tools, software and training needed to develop, debug and
- My secure resources**: Leverage a wide variety of design tools, models and simulators to help with the
- E2E™ support forums**: The engineer's go-to source for help throughout ever step of the design process.

**Questions?**



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