

# TCl Graphics

Semiconductor manufacturing  
key performance indicators

# CMRS Product Modules

## The Chip Insider® (TCI)

- Strategy and Tactics
- Equipment
- Emerging Markets
- TCI Graphics - weekly
- Client Support
  - Access to Analysts
  - Advisories
  - Bullet Proofing
  - Inquiries

## ForecastPro

- Forecasts
  - Macro & Electronics
  - Semis
- Driving Forces
  - Capex
  - Silicon demand
  - Packaging demand
- TCI Graphics - monthly
- Client Support
  - Assistance

## Equipment Databases

- IC Equipment
  - Forecasts
  - Histories
  - Market Shares
  - Yearly & Quarterly
- WFE, Test, & Assembly
- Regional sales
- Captive sales
- Client Support
  - Assistance

## TCI Graphics

- Weather Report
- Monthly and weekly industry performance
  - Electronics
  - Semi
  - Equipment
- Key Metrics

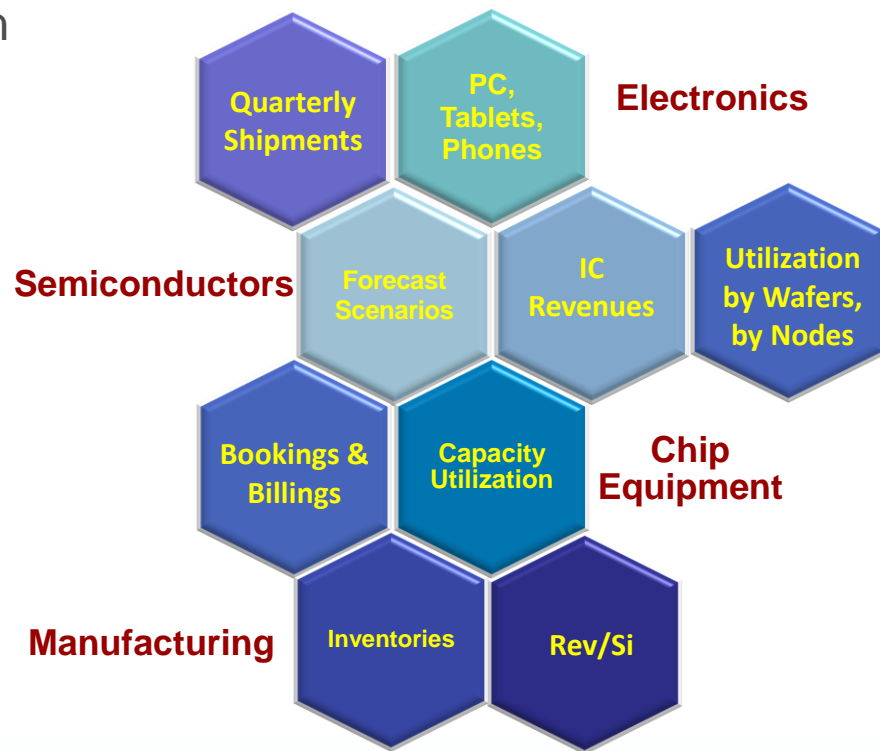
# Semiconductor Manufacturing Statistics

- Unique View into the health of the semiconductor manufacturing ecosystem
  - Key performance indicators across electronics, semiconductor, and equipment supply chains
- Simple charts to transfer VLSI's views for use and communication to management, marketing, and operations
- Weekly and monthly views and analysis result in immediate actions to manage supply chain

# TCl Graphics

*Monthly and weekly snapshot of industry performance*

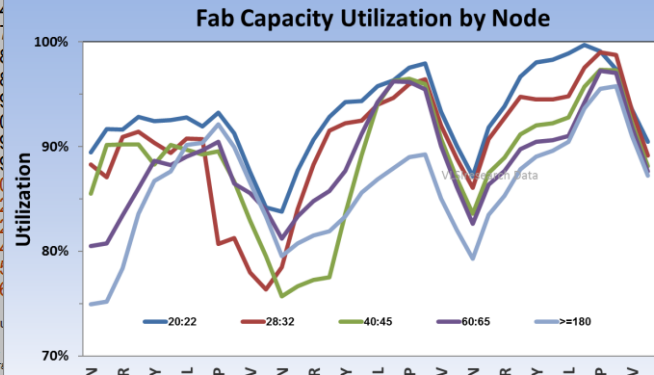
- Main segments affecting the silicon ecosystem
  - Electronics
    - Mobile, PCs
  - Semiconductors
    - Major segments, Capex
  - Equipment
    - Weekly order trends
  - Key Metrics about ecosystem performance
    - Utilization
    - Inventories, Rev/Si



# A Preview of TCIG

## VLSIresearch IC Forecast Scenarios

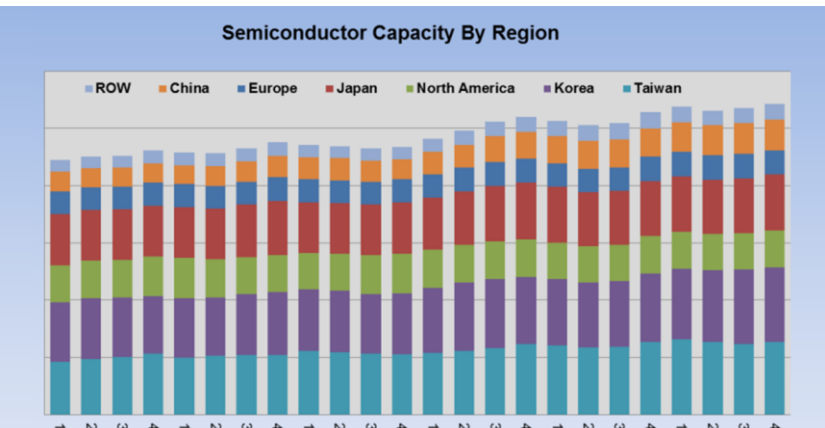
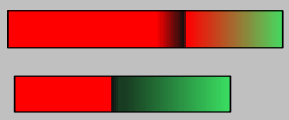
VLSI's Current Forecast	Electronics Mkt (\$B)	Diff. Rate (%)	IC Mkt (\$B)	IC Mkt (BU)	IC Pricing (\$ ASP)	Silicon Used (MSI)	Rev. Per SI (\$/SI)	Utilztn Rate (%)	IC Eq. Mkt (\$B)	Diff. Rate (%)
2008	150.8	13.0%	207.3	155	1.34	7428	20.0	86.0%	11.0	10.8%
2009	140									
2010	170									
2011	180									
2012	180									
2013	190									
2014	200									
2015	190									
2016	190									
2017	200									
2018	210									
2019	220									
2020	240									
2021	240									
2022	260									



Based on our most current forecast.  
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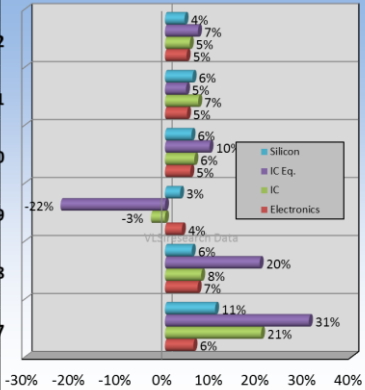
**Operational Flexibility Requirement\***

-40%      -20%      0%      +20%      +40%



Weather Types	Definition
Humid:	It's so good our sales conference will be in Hawaii.
Hot:	It's as easy as selling cold drinks on a hot summer day.
Sunny:	Visibility is great, extending well past six months.
Clear:	Visibility is clear out to six months.
Clearing:	Things are looking better on the horizon.
Fog:	Visibility has been temporarily lost.
Cloudy:	Things look worse on the horizon.
Chilly:	Visibility is clear. But there is no significant order activity.
Rain:	Expected orders lost. Budgets vaporizing.
Storms:	Companies reorganizing. Hard orders are being canceled.
Tomadoes:	Expect heads to roll soon.
Icy Roads:	Things look okay, but one wrong move can kill your career.
Snow:	Hitting bottom. Calm & quiet, but order activity frozen.
Frozen:	No significant order activity. No end in sight.
Temperature Ranges	Definition
> 100 Degrees F:	Delivery is the only issue. Litho lead-times past 18 months.
> 90 Degrees F:	Orders coming in with no sales effort - some out of the blue.
> 80 Degrees F:	Orders accelerating. Capacity buys. Delivery is the issue.
76-80 Degrees F:	B:B ratios should come in at a sustainable 1.1:1.
70-75 Degrees F:	Just meeting reasonable quotas. B:B Ratios are 1:1
< 70 Degrees F:	Orders are expected to decelerate. Price is more the issue.
< 60 Degrees F:	No way we'll meet quotas. B:B Ratios are 0.9:1
< 50 Degrees F:	Technology buys only.
< 40 Degrees F:	Technology is a hard sell.
< 30 Degrees F:	It's like selling refrigerators to Eskimos.
< 20 Degrees F:	We can't give product away. Relationship selling only.
< 10 Degrees F:	They're not returning calls. 5+ attempts made.

## Semiconductor Supply Chain Forecast (Growth in Percent)



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# *Chip Market Research Services (CMRS)*

- Marketing, communication, and strategic planning tool for the semiconductor industry
- Real-time data on the status of the semiconductor business environment
  - Chip supply & demand, inventories, prices, manufacturing capacity
  - Customer and technical trends in design and manufacturing
- Equipment Markets
  - Market shares, forecasts, demand baselines, emerging market analysis

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