

A nighttime photograph of a city street featuring modern architecture. A prominent feature is a long, illuminated glass and metal walkway or bridge structure that spans across the scene. In the background, several tall buildings are visible, one of which has a distinctive facade with many small, glowing circular lights. The street below is filled with light trails from cars, suggesting a busy urban environment. The overall lighting is a mix of cool blues and greens from the walkway and warmer yellows and reds from the streetlights and car lights.

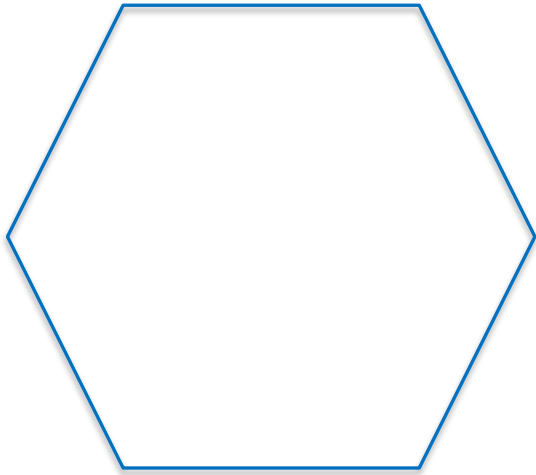
Maximizing Customer Value

through Customer Success

Deepak Maharaj, Customer Success Manager

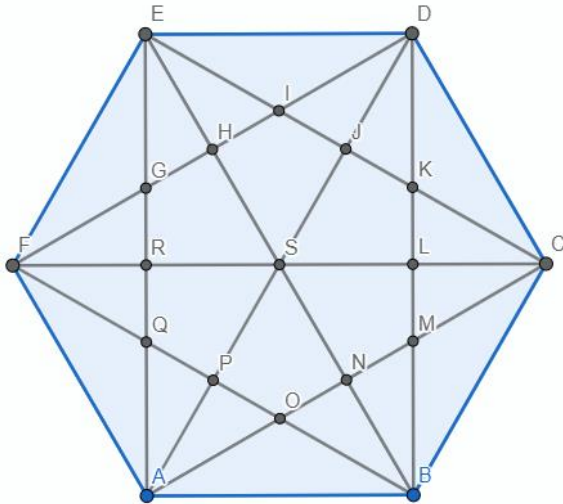
October 2024

Interactive Exercise



Interactive Exercise

What is the possible number of triangles in this Hexagon, if you consider the intersection points of the diagonals?



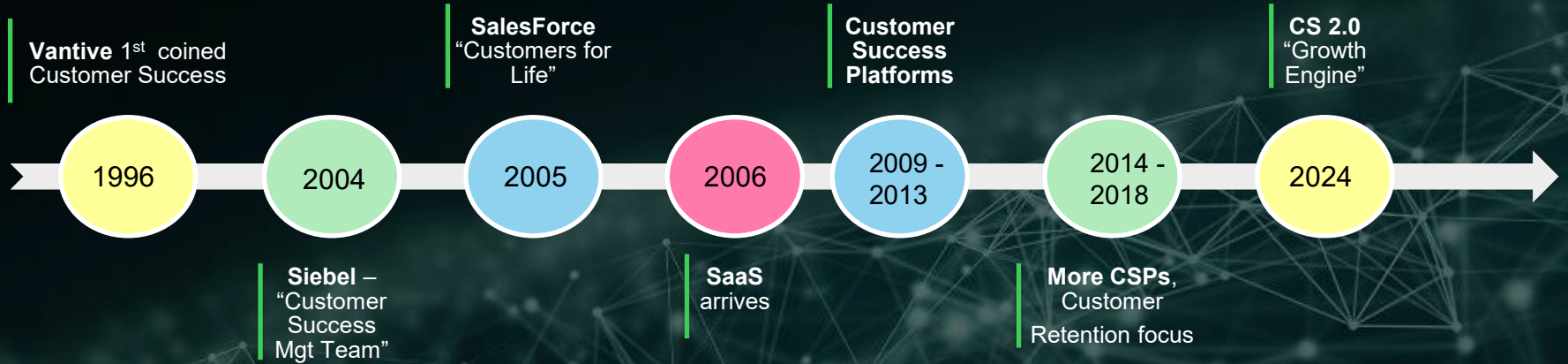
- “you can’t form a triangle inside this hexagon with three sides of the hexagon.
- With two sides you can do it in 6 ways.
- With one side the only non triangle is if two diagonals perpendicular to the side. That gives $6 \times (3 \times 3 - 1) = 48$ ways
- With all diagonals: there are $62(6-3) = 93 = 84$ diagonals of which there are 3 pairs of parallels, so of the
- ways of selecting three diagonals, we have to exclude $3 \times (9 - 2) = 21$ parallel pair of diagonals plus another, and also the 6 way of selecting all three diagonals from a vertex and 1 way of three diagonals through the centre. This leaves $84 - 21 - 6 - 1 = 56$ ways.
- So the total is $6 + 48 + 56 = 110$ ”
- Source: Stack Exchange, 2024 (online)



*“Price is what you pay;
Value is what you get”*

Source: Benjamin Graham, Intelligent Investor; Made famous by Warren Buffet

The Evolution of Customer Success

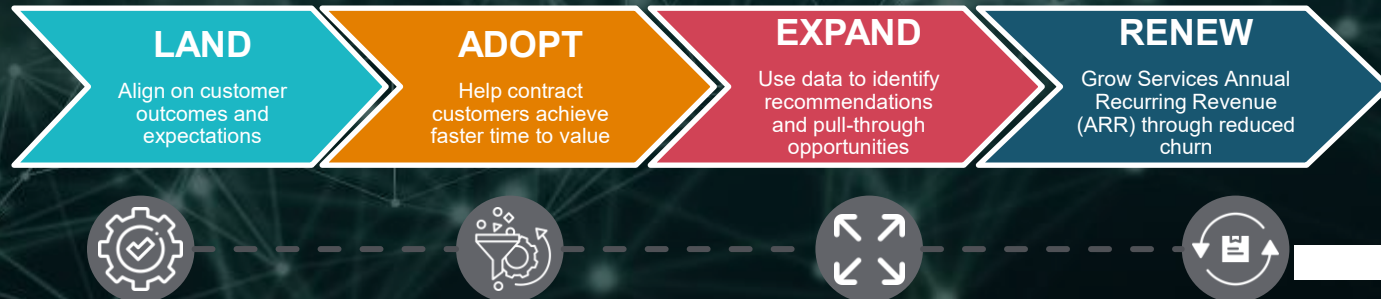


Source: Adapted from Customer Success Association, 2024, and Atkins, Gupta, Roche, *Introducing customer success 2.0: The new growth engine*, 2018

What is Customer Success?

Customer Success is a practice that harness our people, processes and data to accelerate the customer's time to value in achieving their objectives, through the use of our technology and services.

Customer Success is a Philosophy. Customer Success Managers (CSMs) just can't do it alone, it is everybody's responsibility. It flows in the bloodstream of our organization, from Sales, Order Mgt, Project Execution, support, maintenance etc. **This is a journey...and long-term relationship.**



What is a Customer Success Manager?

Customer Success Manager, ensures **delivery on the customer promise** and increase their use and resulting benefit from the solution and services. To become **trusted advisors** as we journey together.

What we do:

- We are good listeners
- We help solve customer problems/challenges
- We encourage you to maximize the use of all services & feature sets
- We are great facilitators. Conduit between customer and company
- We are good news broadcasters- create awareness of new releases, products etc.
- Reasonably good communicators
- We're also:
 - SPOC
 - Onboard ESP customers
 - Have meetings
 - Develop Action/Success plans
 - Monitor and track progress
 - Facilitate Power Advisor Consultations
 - Quote and renew service plans



Roland-Garros: Rafael and Uncle Toni Nadal (Coach for 27 years)

EcoStruxure Service Plan (ESP) Power Management (PM)

ESP PM Value Creation:



Support:

- Software Assurance (labor excluded)
- 24/7 Support (*Emergency only after 8:30pm)
- Direct Access to advanced support
- Remote access troubleshooting



•Monitor & Maintain:

- Server monitoring
- Device monitoring (Ultra plan)
- Dedicated Senior Eng. (Ultra plan)
- Onsite preventive Maint. (optional)



•Optimize & Transform

- Power Advisor Analysis & Insights
- Self help Web portal
- PMU+Subscription (Optional)

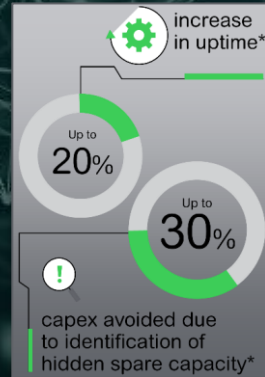


•CSM

- Land, Adopt, Expand, Renew



Improve power reliability and spare capacity with expert recommendations and on-site maintenance



Power Advisor

The Power of Advisor

Value Creating Testimonials on Electrical Network Analytics

- A Power Management System (PMS) provides a rich view into your electrical network. However, if your electrical **network is complex** or there are **not enough expert resources**, it may be **difficult to fully leverage the system benefits**. Power Advisor looks at all the data and identifies the top issues to fix.

Case

- Snr Eng. retired a year ago. PMS not used since.
- Budget constraints. Unutilized PME.
- >2700 assets (incl. UPS', meters, breakers, transformers) connected to PMS. It was difficult to keep track due to info. overload.
- We have 38 transformers across 3 sites. A PMS that nobody knows how to use it

+

PA

- Identified harmonics due to VSD & LED lighting
- Analytics determined Power Factor was low. Financed confirmed Utility penalty per month.
- Determined severe overvoltage conditions in the evening.
- Identified 2 transformers running overcapacity due to recent expansion.

=

Value

- Preventing an outage meant saving patient lives and associated liability
- PA recommended install. Of Capacitor Banks. Saved \$36k p.a. ROI in 2 years
- It undetected it could have caused **premature aging and outage** of our 200K€ transformer.
- Plan is to **upgrade them & prevent downtime of production line**, that cost \$90k p/h. that's excluding property damage & injury if Tx blew

...with cloud-based analytics serving as the technological backbone...

Using data from your power monitoring software, combined with **advanced algorithms and expert analysis**, Power Advisor Digital Service Plans helps you to **optimize the system performance and reliability** of your large and critical power facilities.

Power Advisor enables you to...



Understand your system

Improve visibility, getting a comprehensive assessment of your power system and ensuring your system is correctly configured



Identify and correct relevant issues

Quickly and accurately identify system issues, and be able to know how to proactively address them in the most efficient way



Optimize system performance

Monitor the health of your electrical network, identifying opportunities for improvement and avoiding unexpected downtime

Value mapping for Power Advisor

Power Advisor Technology Portfolio | Four Unique Analytic Modules

Customer
Need

*“Help me maintain and optimize my power management system
so I can maximize uptime and minimize risk”*

*“Provide me with
recommendations to optimize
my electrical system”*

Value
Delivered

PM software
operational
health

Metering
device fleet
management

Data
quality
evaluation

Continuous
Commissioning
of alarm settings

Maximize uptime and reliability of
the electrical system

Power
Advisor
modules

System
Health

Data Quality

Alarm Health

Electrical Health

Enrich the core

Why care about Power Quality?

Complexity of today's installations make our process more sensitive to electrical disturbances.

Deregulated networks and proximity of Renewable Energies impact power quality.

Main consequences are usually:

- Unexpected interruptions of industrial and business processes
- Risks of fire due to overheating or loss of insulation
- Unwanted operation of circuit breakers
- Extra noise or vibration on machines
- Degradation of processes quality
- Financial impacts and penalties from energy provider or due to downtimes

3-6%

of manufacturing sales dollars are spent correcting Power Quality problems

Benefits of good Power Quality:

- Improved energy efficiency
- Reduced utility costs
- Reduced waste and improved operational efficiency
- Reduced emissions
- Increased productivity
- Decreased unplanned downtime
- Increased equipment and power reliability
- Lower operating costs

50%

of mission-critical power outages are due to Power Quality issues

70-80%

of power disturbances originate inside the facilities

8 per year

the typical number of power quality events in a facility

17 hours

average restart time after a shutdown

The Power of Advisor

Value Creating Testimonials on whether Data Quality Analytics have a ROI?

- As your electrical infrastructure evolves with maintenance, modernization & expansions, your **Power Management System (PMS) needs to keep up**. If not properly maintained, your PMS can lose data integrity in as little as 6 months. Power Advisor finds these data quality issues and recommends fixes so you can always trust your data

Case + PA = Value

- I was allocating 90K€ of energy per year to the wrong cost center.
- Our CTs were reversed, meaning that our maintenance teams were troubleshooting on the wrong phase for hours.
- One of our branch circuit meters had a faulty CT on one circuit.
- After an upgrade, a meter was left in demo mode and we never got real readings.

- Power Advisor detected my meter was configured to be on the wrong feeder.
- After Power Advisor found the problem, maintenance immediately found the issues
- After this was corrected, we saw that the branch circuit was too close to capacity
- Power Advisor detected this. Once the meter was properly configured, we found serious power factor issues

- I was able to correct the problem & resolve the billing issue
- Saving hours in maintenance manpower
- We were then able to shift load and prevent an outage that would've cost **10-20K€**.
- These were costing us 50K per year.

Power Advisor report (sample Data Quality report)

Tip: Click the issue title to get more information about that issue.

Impact	Issue Description
2.64 %	Data Gaps in Analysis Period More than 10% of the expected device data for the analysis period is missing. Device affected: 1
1.25 %	Meter Underreporting or Overreporting Consumption 🚫 High priority The energy measurements are not in the range expected from the parent device data. Device affected: 11
0.76 %	No THDv Data Ever Logged No voltage THD (THDv) data is available for the device. Device affected: 5
0.23 %	Significant Unmetered Load 🚫 High priority More than 20 % of the energy flow measured by the device is unaccounted for by its child devices. This is based on the placement of parent and child devices in the Hierarchy. Device affected: 2
0.13 %	Energy Balance Violation The power demand measured by the child devices in the Hierarchy is greater than that measured by the parent. Device affected: 1
0.02 %	Meter Detection Threshold Too High Measurement values are either zero or above a certain threshold. Based on the available data, low range values between zero and the threshold level are expected to be present. Device affected: 1

Firmware version mismatches

This topic lists devices in the power management system that have the same device type but different firmware versions.

The following information is organized by device type and firmware version.

PM3250 (3 devices)	49
8000 (4 devices)	49

Device Type: PM3250 (3 devices)	
Firmware Version: 0	
• LV_E.PanelE2	• LV_E.PanelE1

Issue summary

Significant Unmetered Load 🚫 **High priority**

More than 20 % of the energy flow measured by the device is unaccounted for by its child devices. This is based on the placement of parent and child devices in the Hierarchy.

Impact on overall score: **0.23 %**
Devices affected: 2

Possible Causes	Recommended Actions
There are unmetered downstream loads for this device.	Consider adding power monitoring devices for the unmetered loads.
Existing child devices are not working correctly.	Check for incorrectly configured or malfunctioning child devices. Correct issues if necessary.

Possible Consequences
Incomplete data logging affects the data analysis and display in the power management software and the system health analysis in Power Advisor. Incomplete consumption data can affect sub-billing or cost allocation in the power management software.

See [details on the 2 devices](#) identified with this issue.
Go back to [identified issues](#) for information on all identified issues in this analysis.

Obsolete device types

This topic lists devices in the power management system that have device types that are no longer fully supported by Schneider Electric.

The following information is organized by device type.

7500 (2 devices)	79
7650 (20 devices)	79
8500 (1 device)	80
8600 (493 devices)	80

Device Type: 7500 (2 devices)
End of repair service date: 2015-01-01
End of support date: 2015-01-01
Replacement device type: ION9000
Replacement adapters: Direct replacement

- DS.Battersea05_F1
- DS.Battersea05_F2

Device Type: 7650 (20 devices)

Power Advisor report (sample Electrical Health report)

Identified issues

To determine the electrical health, Power Advisor runs a number of tests on the power management system data. A failed test indicates a possible issue with the data, the device that collected the data, or the electrical network that is being monitored.

The following table shows the possible issues identified for your system. The table is sorted by impact of the issue on the overall score, with the highest impact issue at the top.

Note

High priority issues can have a high impact on the system for each affected device. We recommend that you review and investigate these issues, even if the impact on the overall electrical health score is low.

Tip: Click the issue title to get more information about that issue.

Impact Issue Description

11.86 % [Excessive Harmonic Distortion Condition](#) **High priority**
There are high levels of voltage total harmonic distortion (THDv) or current total harmonic distortion (THDi).
Device affected: 3

11.63 % [Excessive Lagging Power Factor](#) **High priority**
There is a very low lagging power factor.
Device affected: 1

3.44 % [Transformer Overcapacity](#) **High priority**
The peak load on the transformer is close to its rated capacity.
Device affected: 1

0.53 % [Voltage Imbalance Condition](#) **High priority**
The voltage unbalance measurements fall outside of the recommended, standard defined limits.
Device affected: 1

0.17 % [Under Voltage Condition](#)

Excessive Harmonic Distortion Condition **High priority**

There are high levels of voltage total harmonic distortion (THDv) or current total harmonic distortion (THDi).

Impact on overall score: **11.86 %**

Devices affected: 3

Possible Causes	Recommended Actions
The loads include large motor drives, switching power supplies, or other loads with high total demand distortion.	Consider a power quality audit. An audit can find the source of the harmonics issues and can assess the need for an active filter solution.
The power supplied by the electric utility is distorted.	Consider a power quality audit. An audit can find the source of the harmonics issues and can assess the need for an active filter solution.
The transformers are overloaded and distort voltage and current waveforms.	Consider a power quality audit. An audit can find the source of the harmonics issues and can assess the need for an active filter solution.

Possible Consequences

Voltage and current harmonic distortion can cause intermittent tripping of motor drives and protective devices, overheating of transformers and conductors, electronic equipment failure, and higher energy losses.

See [details on the 3 devices](#) identified with this issue.
Go back to [identified issues](#) for information on all identified issues in this analysis.

Analysis details



Device details by issue (continued)

Excessive Harmonic Distortion Condition (continued) **High priority**

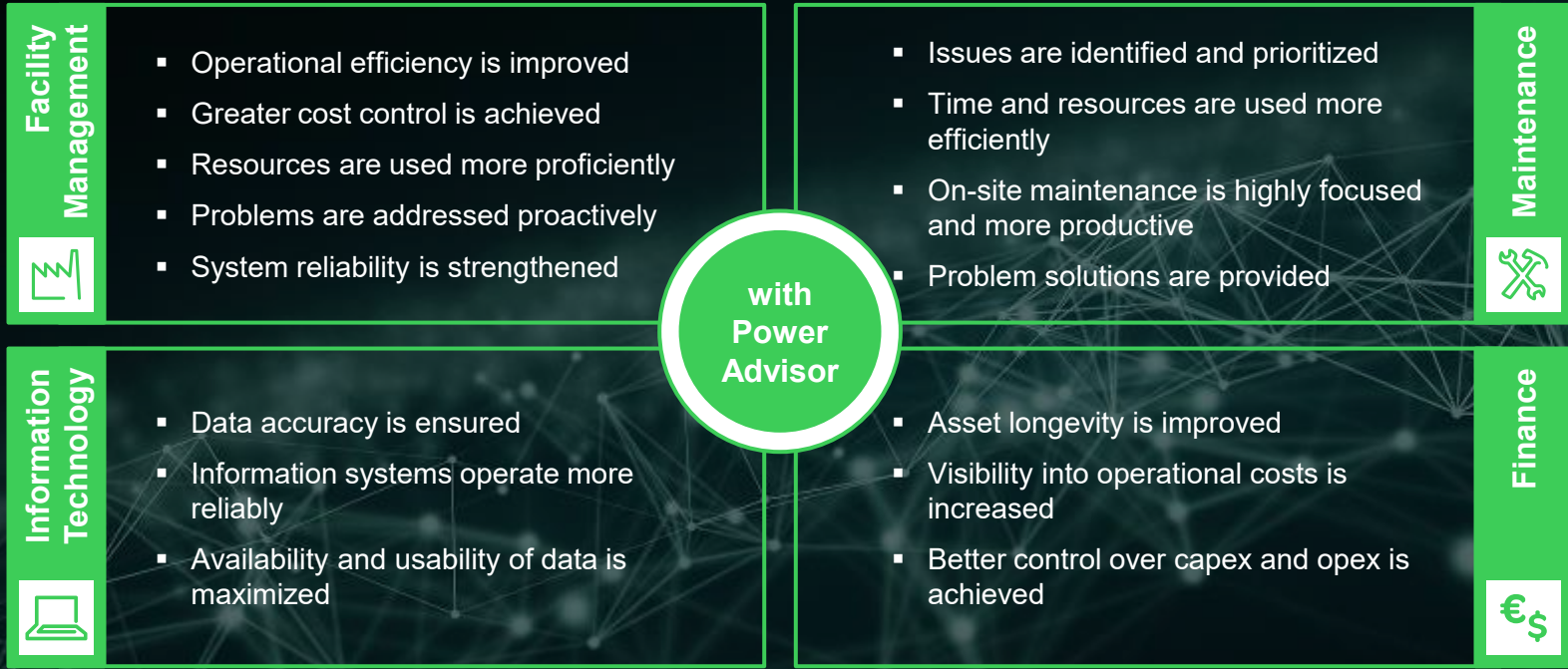
The following chart shows a simulated current waveform with harmonic distortion. The waveform distortion shown is for THDi levels like those observed in your system. This is not an actual waveform captured in your system.



Go back to [Excessive Harmonic Distortion Condition](#) [Review details](#) [Increase](#)

...and delivering valuable outcomes for all stakeholders

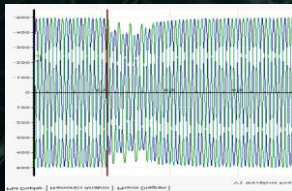
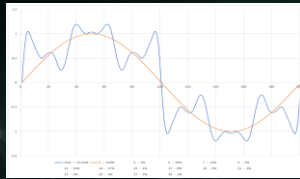
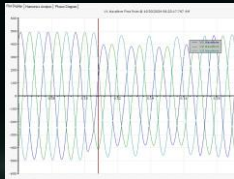
Power Advisor can help provide solutions to some of your **most pressing operational concerns**.



Customer Success Story



Local Municipality, Enterprise PME System. Multiple Buildings and Facilities.



CSM: Deepak Maharaj

Background

- This Municipality is one of the largest in population density in the province.
- Our EPMS solution is an integral part of their Power daily routine & a key component of their sustainability KPIs.
- The EMIS is a cloud base system providing accessibility to multiple users.
- The system has over 200 energy meters connected, monitoring different type of facilities from government buildings to Wastewater treatment plants.

Key Challenges faced.

- Customer noticed high THD on a corporate building.
- Customer additional PQ issues has been detected in the same building at the submetering level.
- Customer wants to avoid equipment failure.
- Customer is requesting additional support from the PQ Specialist.

Solution

1. **The Power Advisor Report** showed the THD levels at specific building, which was highlighted during the PA meeting.
2. **The CSM** helped the customer to coordinate a site visit with one of the PQ specialist to do dip assessment related to the PQ issues on site.

Results

- ✓ PowerLogic AccuSine equipment properly sized to mitigate the harmonic distortions to avoid failure on sensible devices.



Apps,
analytics,
and services



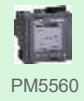
EcoStruxure
Power
Advisor

Edge
control



PME
Cloud Base
System

Connected
products



ION8650

ION9000

ION7650

PM5560

Key Takeaway

1. CSM will work close with our customers to provide a proper solution to make their elec. Infrastructure reliable.
2. The analytics in Power Advisor report uncover potential issues that can be resolve with the report recommendations and the verification of our PQ specialists.



PowerLogic AccuSine
PQ Solutions

Life Is On



Q&A

Thank you!

Life Is On

Schneider
Electric

Life Is On

Schneider
Electric