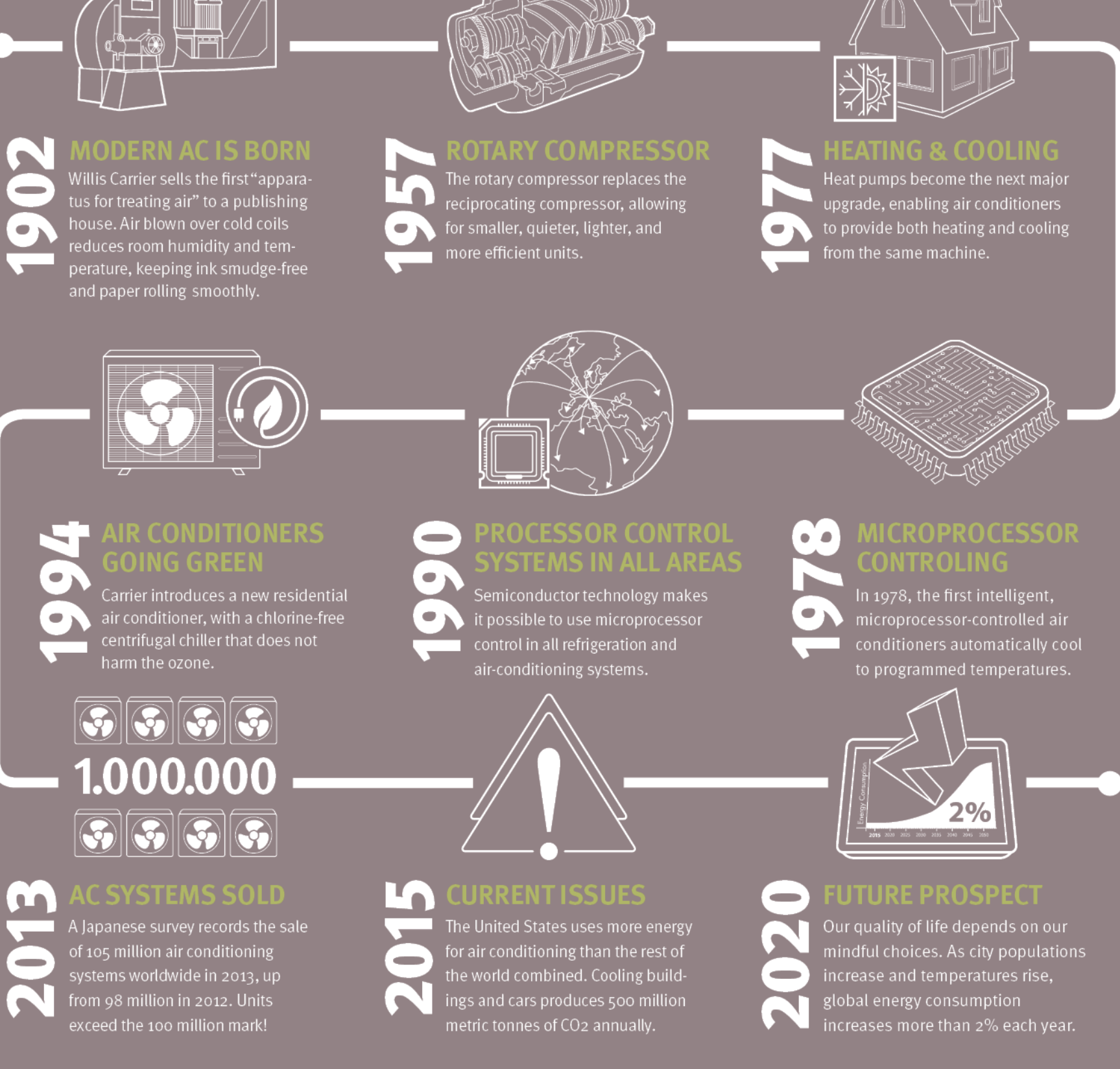


ARE YOU READY?

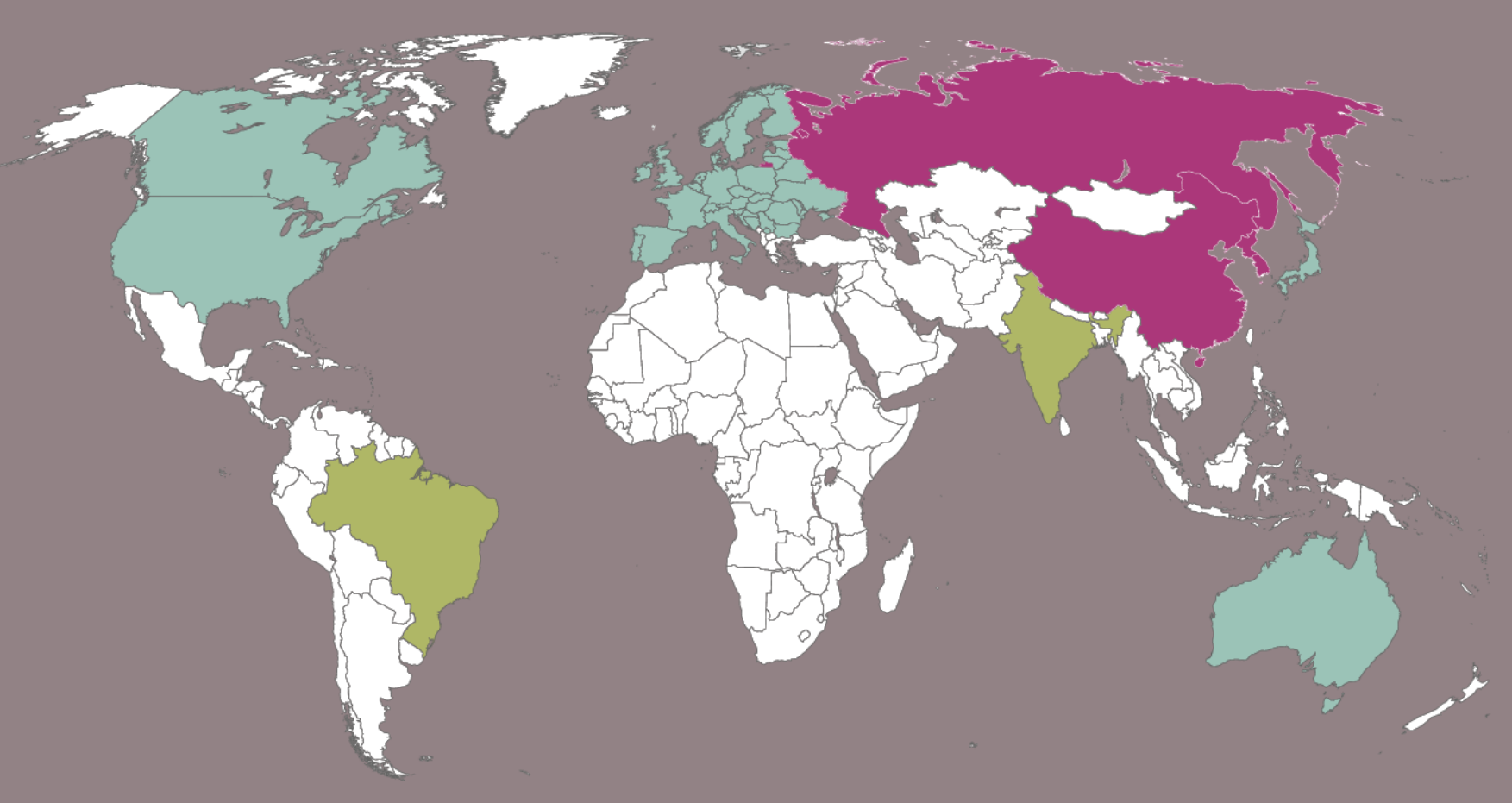
The climate of the future depends on our innovation today.

A Story of Innovation, Efficiency and Sustainability



WHAT YOU CAN DO

Develop targeted solutions based on geography



WORLD MARKET (USA, AUSTRALIA, EMEA, CANADA, JAPAN)



Homes with greater connectivity require an integrated cyber-physical network across devices, with **seamless protection against digital attacks**. Air conditioning systems should integrate cyber security to protect against suspicious IoT connections.

MARKET GROWTH
in 2013

20-22%

CHALLENGE

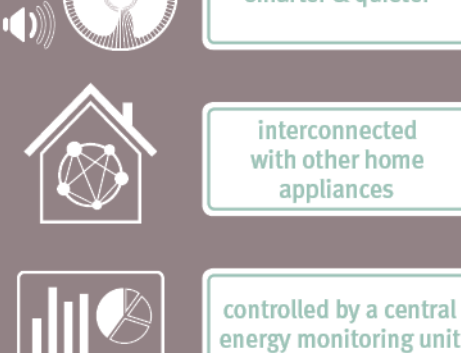


CYBER PROTECTION IN IOT-CONNECTED HOME AUTOMATION

Homes with cyber-physical networks are at increased risk of digital attack. Air conditioning systems should integrate cyber security to protect against suspicious IoT connections.

SOLUTION TRENDS

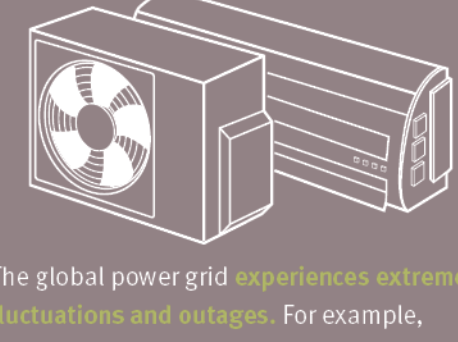
Making the appliances...



KEY BENEFITS



WORLD MARKET (BRASIL, INDIA)

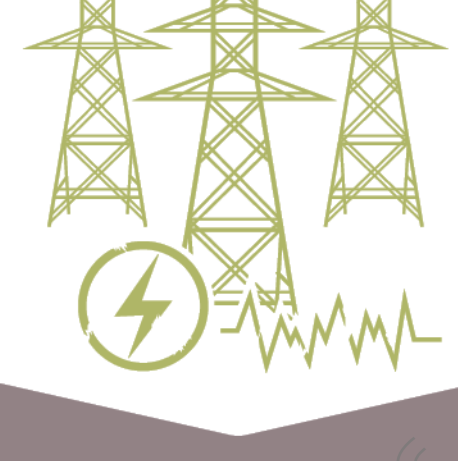


The global power grid **experiences extreme fluctuations and outages**. For example, India witnessed an electricity shortfall of 17 gigawatts this summer, with residential outages of 16 hours per day in some areas.

MARKET GROWTH
in 2013

130%

CHALLENGE



GAPS AND OUTAGES IN THE POWER GRID

The global market requires affordable air conditioning units that use minimal power to operate consistently at low cost, even during energy shortages.

SOLUTION TRENDS

Making the appliances...



KEY BENEFITS



WORLD MARKET (CHINA, RUSSIA, KOREA)



Asia Pacific is the largest world market, with 55% of global units and sales of USD 48.3 billion. Megacities in Asia Pacific **demand new, minimalist living concepts** to solve overcrowding. Cost is a also huge factor, especially in China.

MARKET GROWTH
in 2013

29-35%

CHALLENGE



MEGACITIES DEMAND NEW, MINIMALISTIC LIVING CONCEPTS

Create air conditioning systems for tiny apartments in overcrowded megacities. Units should be small, manageable, economical, and also function as home design accessories.

SOLUTION TRENDS

Making the appliances...



KEY BENEFITS



ACT NOW!

Are you ready to take on the challenge?

Today's best air conditioners use **30% to 50%** less energy to produce the same amount of cooling as air conditioners made in the mid 1970s.

30%-50%
less energy

Even if your air conditioner is only 10 years old, you may save **20% to 40%** of your cooling energy costs by replacing it with a newer, more efficient model.

Here are the **components** for your innovative, new solution:



With these **success factors** you will fulfill the market requirements for a **new air conditioning system**:

- Form, size and weight
- Platform concept
- Digital hacking protection
- Fast start-up and cooling
- Energy efficiency
- Robustness in harsh environments
- Reliable, consistent, long-term operation
- Remote monitoring
- Overall reliability and quality
- Long lifetime
- Security and safety
- Ease of use
- Appealing design and form
- Interoperability

This is why the climate of the future depends on **our innovation** today

WE ARE READY TO HELP!

Intelligent Power Modules

IRAM
The IRAM family of System-in-Package (SiP) shrinks and simplifies the design of appliance motor drive applications including air conditioners, fans, compressors and washing machines from 400W up to 10kW motors.

Motion Control Engines tailored towards Home Appliance (iMotion)

MCE
The iMotion MCE integrates all the control and analog interface functions required for sensorless speed control of PM motors. 32 bit MCE with built-in hardware accelerators enable high performance FOC algorithm. PC Software tools allow designer to customize Digital IC firmware to meet application requirements.

XMC Micro-Controllers

XMC1300
XMC1300 microcontrollers bring together the ARM® Cortex®-M0 core and market proven and differentiating peripherals in a leading-edge 65nm manufacturing process. XMC1300 is the number one choice to bring traditional 8-bit designs to the next level.

Authentication Turn-key Solution

SLS 10ERE
The OPTIGA™ Trust SLS 10ERE is a turn-key authentication product offering a robust cryptographic solution. It is designed to assist system manufacturers to prove the authenticity, integrity, and safety of their original products.

