# 9.1 RAS strategy

The RAS strategy is to manage change by learning from previous generations and investing in new RAS function to eliminate or minimize all sources of outages. Enhancements to z13s RAS designs are implemented on the z14 ZR1 system through the introduction of new technology, structure, and requirements. Continuous improvements in RAS are associated with new features and functions to ensure that IBM Z servers deliver exceptional value to clients.

The following overriding RAS requirements are principles as shown in Figure 9-1:

- Inclusion of existing (or equivalent) RAS characteristics from previous generations.
- Learn from current field issues and addressing the deficiencies.
- Understand the trend in technology reliability (hard and soft) and ensure that the RAS design points are sufficiently robust.
- Invest in RAS design enhancements (hardware and firmware) that provide IBM Z and Customer valued differentiation.

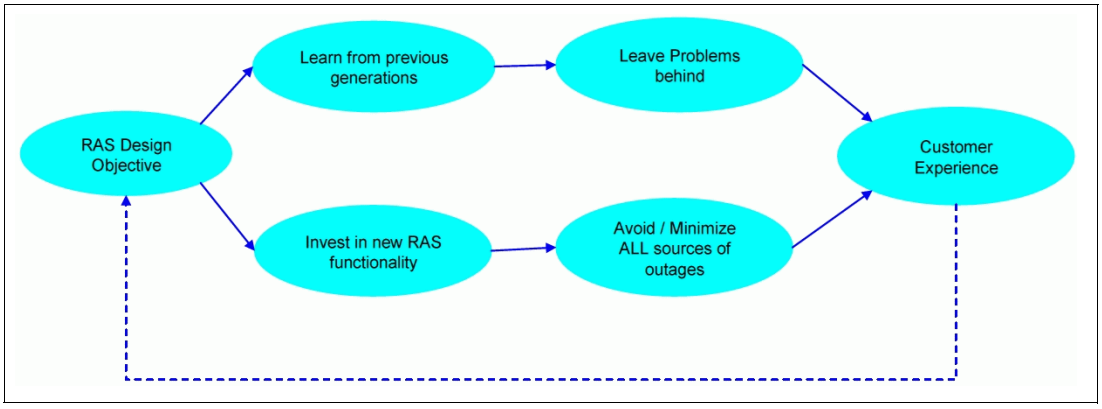


*Figure 9-1 Overriding RAS requirements*

# 9.2 Structure change

The z14 ZR1 is a transitional machine, not just a simplified version of z14 M0x with the following Goals:

- Enhanced system modularity
- Standardization to enable rapid integration
- Platform simplification

The z14 ZR1 is built up in a new form factor that is an industry standard 19-inch rack. It is an air cooled system that fulfills the requirements for an ASHRAE A3 environment (as the z13s). The CPC Drawer and the PCIe+ I/O Drawer uses the same Chipsets and PCIe I/O adapters as the z14 M0x models.

The power subsystem is completely redesigned and is now based on 200 - 240 V AC power distribution units (PDU). This configuration uses a Power System Control Network (PSCN) structure, which is the industry standard in data centers.