With our upgrade solution, you can integrate your existing multimotor drive systems at reasonable expense into the world of digital automation and drive technology, with all its advantages. Using the concept of phased modernization, it is now possible to spread the costs for upgrading across several phases. In the first phase, automation and drive controllers can be replaced, followed by the power section and motor in later ones.

The challenge
Productivity increases and economical operation of a plant have become more important than ever for plant owners and operators. An older multimotor system, however, is typically no longer capable of delivering the operating convenience, visualization, controller quality, quality management, or reliability required today. Spare part procurement, as well, is becoming increasingly difficult, as is finding genuine specialists for maintenance work.

Yet, a complete plant upgrade is often out of the question due to budget constraints.

Your benefits
- Advanced visualization and operation functions ensure reproducibility and quality in the production process. A better overview leads to fewer operator errors.
- A high-value controller is the basis for optimum plant performance and high production quality.
- A PROFIBUS interface enables the access to Totally Integrated Automation which is the basis for consistency in engineering, data storage, and communication.
- New device technology reduces maintenance and spare parts costs.

Our solution – phased modernization
Our phased modernization concept provides the ideal solution for upgrading multimotor drive systems. The solution can be used with all drive systems, regardless of the manufacturer, and is capable of processing an analog torque or current setpoint.

Phased plant modernization
Adapted to your budget planning, the modernization project is divided into several phases. The objective of the first phase is to upgrade the automation technology and drive system controllers to the state of the art. Later phases then focus on the more cost-intensive effort of replacing the power section and the drive system’s motor. Interfaces are configured for the next modernization phases to eliminate the need for expensive provisional arrangements.
**Your Benefits**
- Easier financing by spreading the upgrade effort across several phases.
- Predefined interfaces for the next modernization phase eliminate the need for expensive temporary arrangements. Later modernization of the power section and the motors can be done without additional effort.
- The costs for a modernization phase are generally less than for a complete equipment overhaul, but the sum of the costs of the individual phases is not greater than for modernization in a single step.

**More transparency and quality by improving the process with digital automation and advanced visualization technology**
Advanced automation and visualization systems enhance the functionality of your drives significantly by providing:
- Convenient user interface for straightforward, low-error operation
- Visualization for a better overview and faster fault localization
- Improved process control through additional process information
- Improved documentation and archiving (quality documentation)

Standard components proven in a wide range of industrial applications include:
- SIMATIC® S7-400 for open-loop control, higher-level closed-loop control, and communication
- SIMATIC WinCC as visualization interface
- MasterDrive or DC Master to link older power section equipment into the new automation system

**Higher performance using digital drive controllers**
A state-of-the-art drive controller forms the basis for further performance improvements. Far superior to analog controllers, its advantages include:
- High-precision digital speed controller
- Improved reproducibility and documentation capability
- Simplified fault localization through bus connection and diagnostic tools
- Reduced spare parts inventory
- Future-oriented interfaces
- Rapid service

The smallest MasterDrive unit is connected via PROFIBUS DP to the automation system and is used to implement the digital speed controller and to process additional torque setpoints and limit values. Connection to the older power section is analog in the form of the torque setpoint.

**High operating reliability and low maintenance costs**
Realization of this first phase increases the operating reliability of your equipment significantly. With the new technology, you benefit as well from our long-term commitment to service and support. Problems with spare parts procurement and dwindling service personnel cease to be major concerns.

As a result, lower maintenance costs and improved plant availability make a significant contribution to the cost-effective operation of your equipment.

**The next phase: upgrading the motor and the power section**
The second modernization phase involves the replacement of the power section and the motor. The existing controller group is simply connected to the new, correctly sized power section. Following the setting of important parameters, the new power section can begin operation. No software must be modified to achieve full functionality with the higher-level automation system. The new drive system SINAMICS is easily connected with a simple adaption of the automation via PROFIBUS DP.

**Modernization with Siemens Industrial Services**
With our in-depth knowledge of industry technologies, products, and systems, we are in an excellent position to provide a tailor-made solution package, which delivers maximum performance at a cost well within your current budget.

We determine the current open-loop/closed-loop control requirements, generate a specific and optimized solution concept, design the hardware and software, test and commission, and provide training and plant service.

For further information please contact:

www.siemens.com/migration