



Integrated condition monitoring

The foundation for improved machine and process performance



Achieving optimum return on your condition

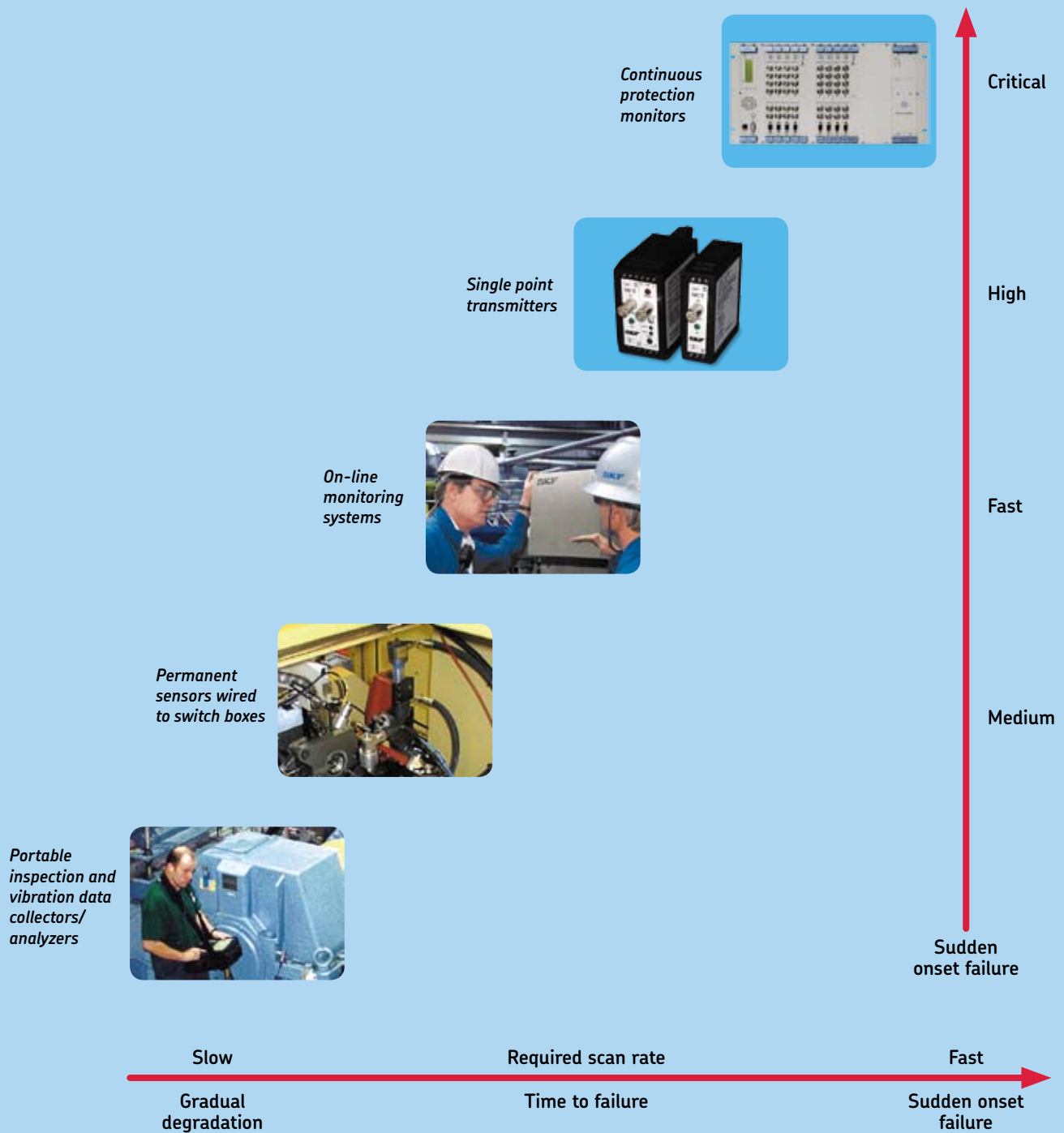
In the past decade, industrial facilities around the world have come to recognize that condition monitoring is a cost-effective way to avoid unanticipated downtime. No doubt, your plant has incorporated some aspects of condition monitoring into your regular machine maintenance and reliability programme.

More recently, facilities have discovered the importance of integrating collected information into a plant-wide system that can be shared by everyone with a key role in plant productivity. This trend has demonstrated that through a collaborative effort, maintenance, operations, engineering and management have been able to achieve productivity levels that were previously out of reach.

If you are seeking even better results from your programme – and an even greater return on your condition monitoring investment – the first step is to ask some important questions:

- What is the best mix of periodic and continuous (on-line) data collection?
- What are the latest tools for collecting and analyzing data and how are they better?
- What is the best software platform for viewing, analyzing and sharing data?
- How important is an “integrated” software platform?
- How can you use the collected data more efficiently and effectively?
- What are decision support systems and how can they improve bottom-line results?
- What systems are available that effectively interface with your existing plant systems?
- How can personnel and equipment be best utilized?
- How can you use the success of one facility to benefit all plants, even globally?
- How do I get started, or get my current programme back on track?
- What added value does SKF provide?

monitoring investment





No company has more experience improvin

Asking the right questions and understanding the value of a solid condition monitoring foundation is a start. The next step is aligning yourself with a company that has not only the right mix of products and services, but the people and experience to help you make the right decisions.

With nearly 100 years of experience, SKF has a knowledge of rotating machinery reliability that is unmatched in the world. Close working partnerships with our customers have given us a unique and intimate understanding of the processes and challenges specific to every major industry. As a result, SKF stands apart as a total solution provider for maximizing machine and plant productivity.



g machine and process reliability

- SKF is a technical partner to Original Equipment Manufacturers (OEM) worldwide and may well have supplied the bearings for or helped design your machinery.
- SKF industry and application specialists have an in-depth knowledge of industry specific equipment and applications.
- Our global support infrastructure is backed by the industry's most sophisticated R&D effort and a vast distribution network.
- SKF offers complete programme integration, from data collection hardware to condition monitoring software and decision support systems.
- Customized reliability solutions are available to meet your plant's unique productivity and overall business objectives.
- SKF brings together in one place the collective knowledge of the world's most experienced machine reliability experts.

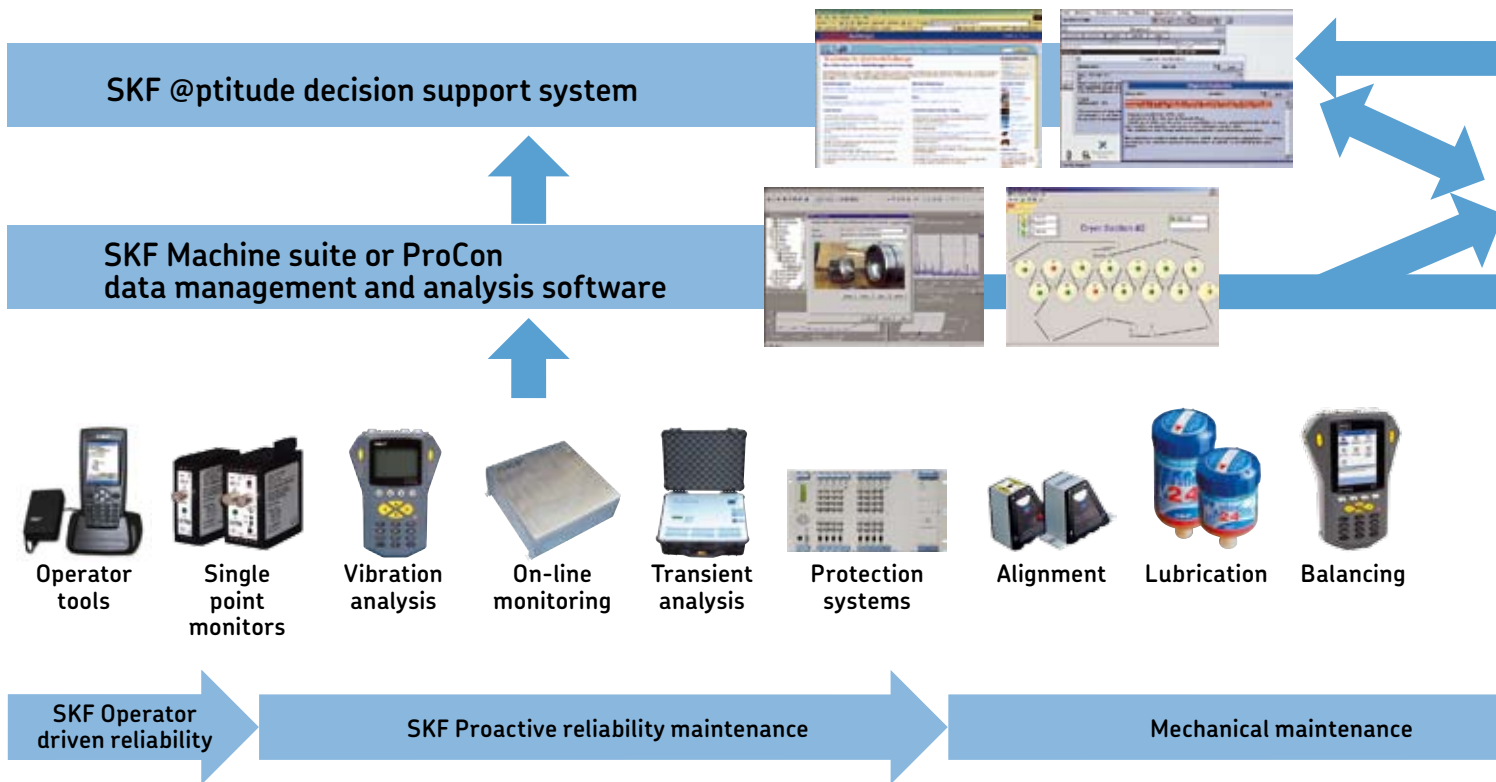
An integrated platform for achieving optimum

Products and services for bottom-line results

Why implement a condition monitoring programme? For most facilities, the goal is to reduce unscheduled machine breakdowns and to improve their competitive advantage.

Whatever your reason, condition monitoring is the foundation of your plant's maintenance strategy. Without the right information – and the means to use this information throughout your plant and across departmental lines – your programme will likely never achieve the savings and added productivity that are possible through an integrated condition monitoring programme.

SKF offers a comprehensive, integrated approach that goes beyond condition monitoring to include a vast array of product and service solutions designed to assist you in optimizing performance of your plant machinery. SKF can customize a solution to help you achieve your business objectives by addressing your specific reliability and productivity challenges.



m performance from plant equipment

Decision support systems – SKF @ptitude decision support system replaces labor-intensive data analysis with an automated process that identifies the probability of specific faults within an asset or process and then prescribes appropriate action. The system links with a range of data sources to facilitate accurate and timely decision making. These include condition monitoring systems, process and distributed control systems, computerized maintenance management systems (CMMS), enterprise resource planning (ERP) and other engineered solutions.

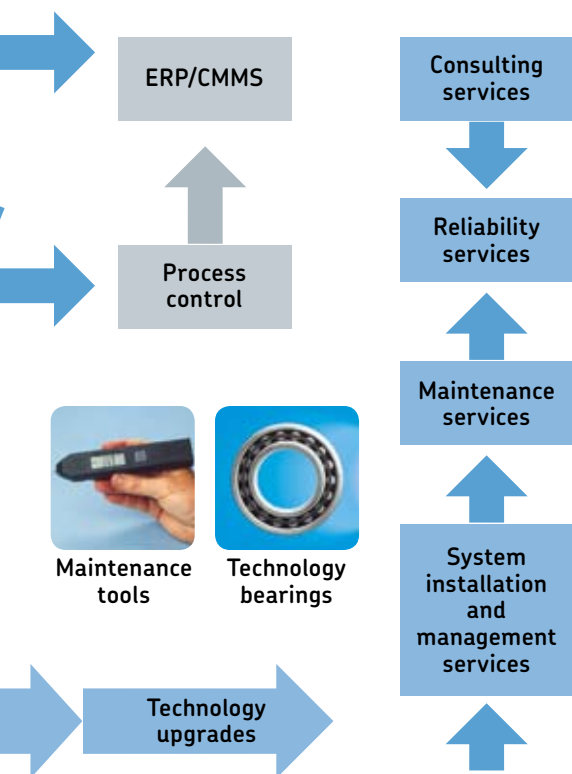
Condition monitoring software – SKF Machine suite software forms the basis for a completely integrated approach to condition monitoring, permitting fast, efficient and reliable storage, management and retrieval of large amounts of complex machine and plant information. Machine suite accepts data from the full range of SKF data collection devices and interfaces with the SKF @ptitude decision support system to facilitate consistent and reliable decision making.

Data collection hardware – SKF offers a complete range of condition monitoring equipment, from hand-held data collectors/analyzers to on-line monitoring and machine protection systems. These products offer a seamless interface to condition monitoring software, CMMS, ERP and other plant-wide systems.

Tools and lubricants – Safe and proper machine maintenance is critical to optimize equipment running time. The development of SKF tools and lubricants is based upon our own experience in field work and includes the latest technologies.

Component innovations – New component innovations are needed to achieve productivity goals beyond those intended by original equipment manufacturers. SKF continues to develop bearing and seal products that allow machinery to run faster, longer, cooler and virtually maintenance-free in many difficult applications.

Services – From programme assessment to maintenance strategy and more, SKF offers services to help you make the most of your reliability investments.



SKF offers data acquisition hardware, condition monitoring software, decision support systems, and reliability and logistics services

Getting your programme started



SKF offers many options for the user who wishes to begin a condition monitoring programme. These basic instruments for vibration analysis can get your programme started with a nominal investment or can complement an existing programme.

Minimal training is required to use SKF basic condition monitoring products. Used to spot check machines, these tools establish trends which identify problems early, allowing manual input to predictive maintenance software or standard spreadsheets for review and analysis.

Engineered for ease of use, kits offer a convenient combination of monitoring tools to warn of problems before they result in unplanned downtime.

SKF Vibration pen plus

This small but sophisticated gauge allows you to assess vibration in industrial non-reciprocating machinery (600 to 12 000 r/min). Overall vibration measurements provide early warning of machinery problems such as mechanical looseness and imbalance. Acceleration enveloping provides early warning of bearing and gear mesh faults.

SKF MicroVibe P

The first of its kind, this product is an advanced vibration meter which provides analysis power without complexity. Made to fit the expansion slot of a Personal Digital Assistant (PDA), the device collects and displays overall vibration, time-waveform and FFT spectra, automatically analyzing vibration results.

SKF basic condition monitoring tools are an ideal way to begin using condition monitoring data to improve machine reliability and availability. With a combination of complementary tools, kits provide a convenient and cost-effective way to reduce unexpected downtime.



SKF Basic condition monitoring package

This convenient kit contains an SKF Vibration pen plus and an SKF non-contact thermometer for safe measurement of hot, hazardous or hard-to-reach surfaces. The package also includes an SKF Inspector 400 ultrasonic probe, which is used to check steam traps and valves and detect pressure or vacuum leaks, arcing in electrical apparatus, and more.

SKF Bearing analysis kit

In addition to an SKF Vibration pen plus, this kit includes a non-contact temperature probe that senses the energy of an object with an infrared detector. Just point and squeeze the trigger to assess the temperature of bearings and other moving parts or hot surfaces. Also included is an oil check monitor for detecting changes in oil condition caused by water, fuel contamination, metallic content and oxidation.



SKF Bearing analysis kit



SKF Basic condition monitoring package



SKF MicroVibe P

Operator tools for improved communication

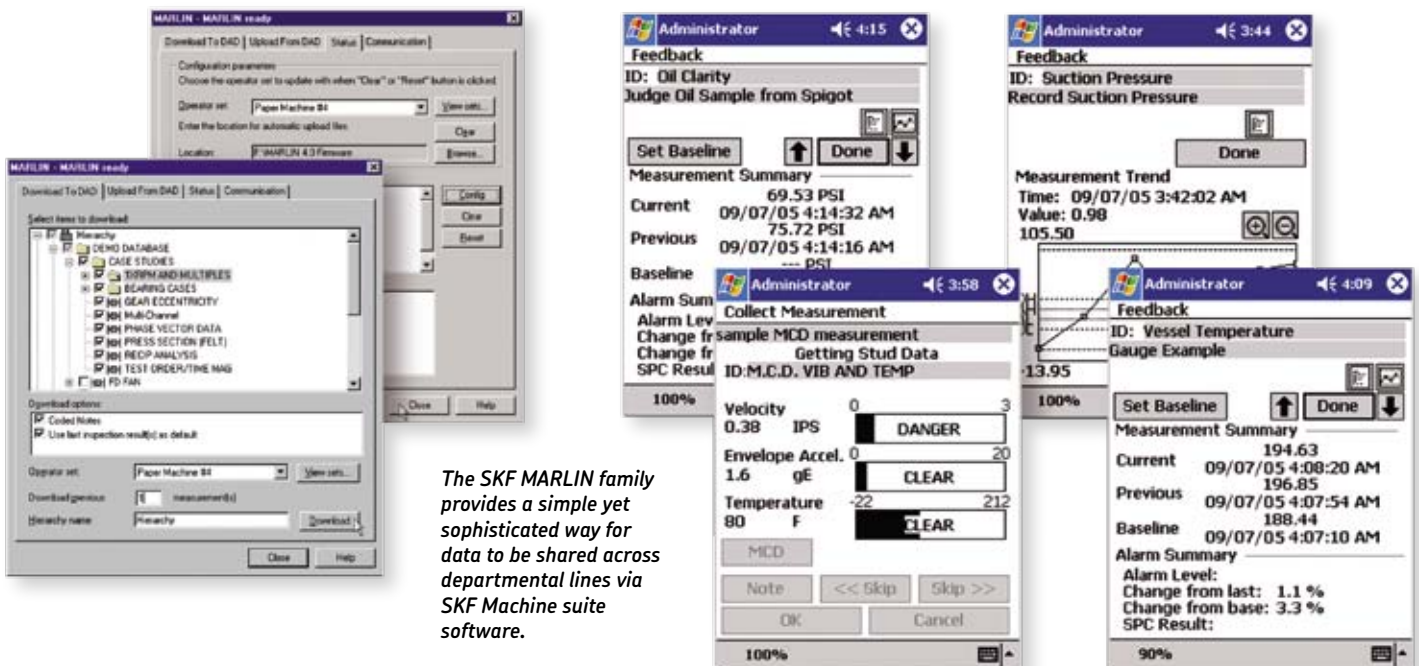
Transform machine and process data into plant productivity

Having pioneered the development of products for operators involved in the reliability effort, SKF continues to lead the way with a range of innovative SKF MARLIN data managers.

Designed to work together as a data management system or as individual condition monitoring tools, MARLIN components automate the machine inspection process and enable the day-to-day activities of operators to be integrated with maintenance and engineering to improve plant reliability.

- Virtually eliminates errors in manual data gathering and recording
- Captures machine vibration, inspection and process data to create historical records
- Helps identify process problems before they result in unplanned downtime
- Enables a proactive approach to plant reliability
- Gives operations personnel a key role in the reliability effort
- Optimizes personnel resources and increases inspection of plant assets
- Turns process data into actionable information

Supported by SKF Machine suite software package, SKF operator tools enable trending and detailed analysis and reporting, as well as plant-wide sharing of information. Data is also integrated with the @ptitude decision support system.



and reliability

SKF MARLIN – The family of electronic data managers

SKF MARLIN data managers are a family of powerful hand-held computers enabling collection, storage and review of machinery condition and plant process data. Customized input forms permit quick, paperless recording of data. Users are alerted and provided with corrective instructions when conditions exceed programmed limits. They can also be customized to handle statistical process control, scheduling, environmental, health and safety and other regulatory or internal plant requirements.

1. SKF MARLIN I-Pro

A cross-functional tool for operations, maintenance or plant management. Ergonomic, pocket-sized and suitable for many industrial environments.

2. Quick connect studs for SKF MARLIN

Permanently installed mechanical devices help ensure proper probe location, orientation and the highest quality measurements.

3. VibPak for SKF MARLIN

Connects with the MARLIN data manager to collect vibration velocity and enveloped acceleration data from standard industrial accelerometers on machinery in remote or hard-to-reach locations. The collected data can be trended in the MARLIN data manager or in the Machine suite software.

4. Machine condition detector (MCD) for SKF MARLIN

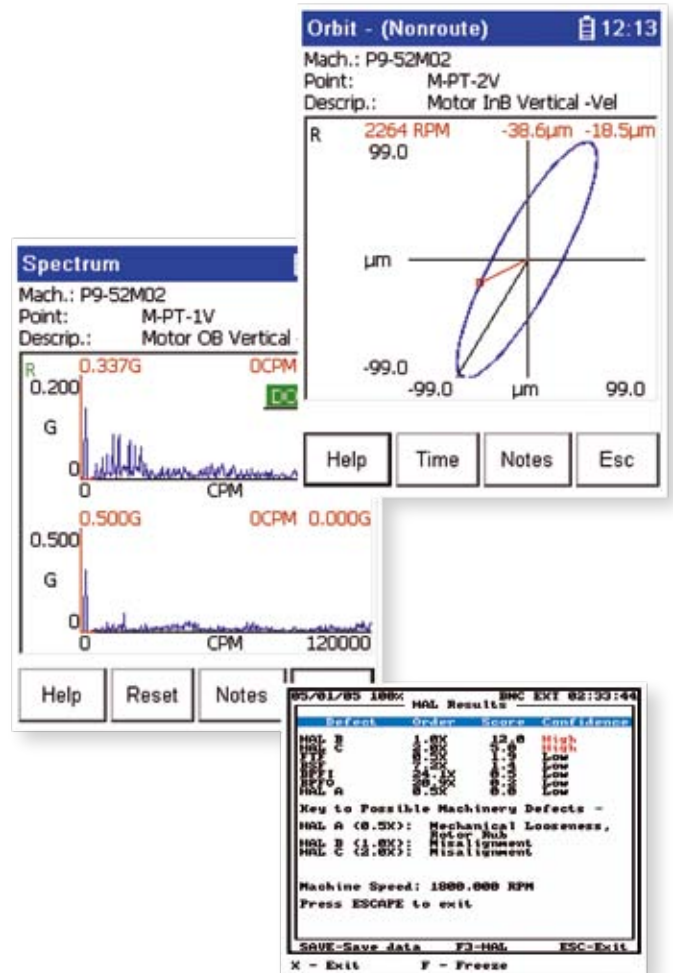
A wand-style device that measures vibration (velocity and enveloped acceleration) and temperature. Automatically compares collected data with pre-set baselines and alerts the user when normal limits are exceeded.



Portable vibration data collection and analysis

Unmatched versatility, reliability and functionality have made the family of SKF Microlog Analyzer data collectors the analyst's choice for portable condition monitoring equipment. The line offers a comprehensive range of resident features and functions to help you get the most from your plant machinery.

The complete line of SKF portable vibration data collectors/analyzers (except MX Series) is supported by SKF Machine suite software, which stores, manages and performs more extensive analysis on collected data.



sis for proactive maintenance

1. SKF Microlog Analyzer CMVA 65

Portable vibration data collector/FFT analyzer

The CMVA 65 not only collects vibration data and performs standard analysis, but also incorporates patented SKF technology in the form of imbedded "Wizards." Wizards facilitate detection, analysis and correction of machine problems with minimal set-up effort. It also features a large and bright colour display for efficient detection and identification of machine problems that can lead to unexpected downtime.

2. SKF Microlog Analyzer GX series

Portable vibration data collector/FFT analyzer

The GX series advances Microlog users to the next generation of high performance, two-channel, route-based portable vibration data collectors/analyzers with its crystal clear, colour display and powerful, modular platform. The GX series utilizes the latest advances in analog and digital electronics, including digital signal processing (DSP) and a high resolution Sigma-Delta A/D converter to provide both speed and accuracy in the vibration data acquisition process.

3. SKF Microlog Analyzer CMXA 51-IS

Intrinsically safe portable vibration data collector/FFT analyzer

The CMXA 51-IS, an intrinsically safe, hand-held and rugged instrument, allows for the collection of vibration, process and dynamic data in hazardous environments where an intrinsically safe instrument is required for the detection, analysis and correction of machine problems.

4. SKF Microlog Analyzer MX series

Portable maintenance instrument

The MX is a stand-alone maintenance instrument with the same high performance hardware highlights as the GX, however, its modular platform is designed to be a single tool for a range of service, maintenance, inspection and diagnostic applications including:

- Machinery maintenance
- On-the-spot machinery health checking
- Inspection/machinery screening
- Condition assessment
- Analysis and diagnosis of noise and vibration related problems
- Single and dual plane balancing

SKF Microlog accessories

A range of accessories provides additional capabilities to further enhance your analysis and diagnostic efforts:

- Optical reference kit
- Smart laser sensor tachometer
- AC/DC current clamp
- Triaxial accelerometer
- Infrared thermometer
- Temperature probe
- Balancing kit
- Headphones
- Strobelight

The SKF Microlog Analyzer family of products provide maintenance and reliability personnel with powerful monitoring and analysis capabilities.

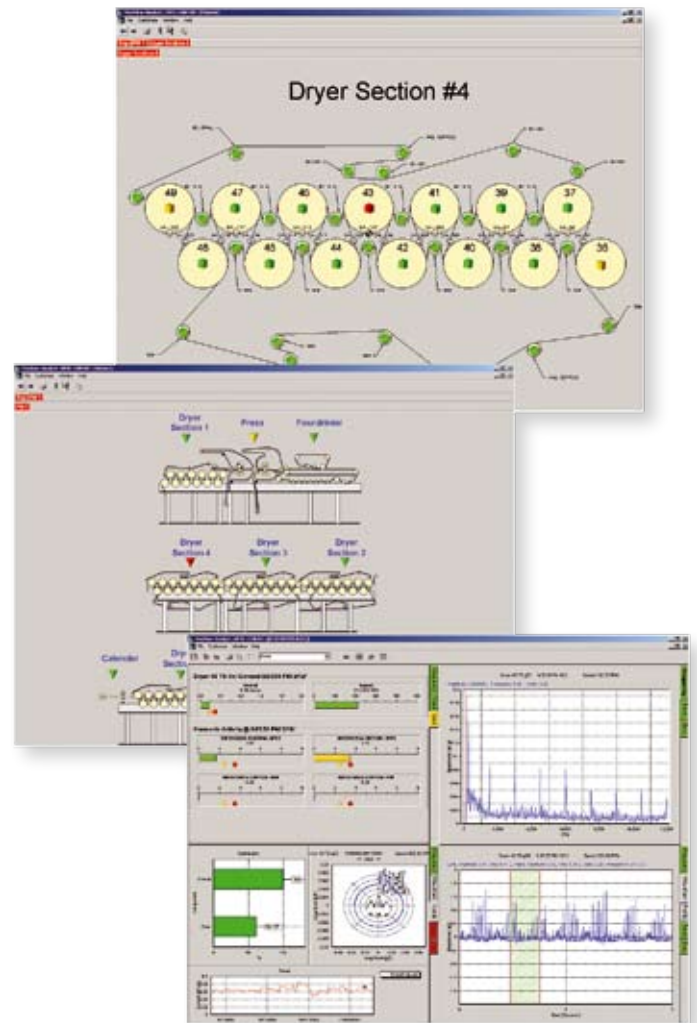


On-line monitoring for continuous assessment

On-line monitoring is an important tool to optimize machine and plant availability. Permanently installed sensors collect vibration and process data, 24 hours per day and 7 days a week, and alert personnel to important changes in machine conditions that can result in unexpected downtime and negatively impact production output.

Here are just a few of the reasons plants choose to implement on-line monitoring programmes:

- **More reliable and proficient decision-making**
Processed data is transmitted continuously from the machine via permanently installed sensors. This provides for improved data quality and integrity. In addition, acquired data may be merged with process information, so all pertinent details are readily available for analysis on demand.
- **Better collaboration**
To facilitate team-supported decisions, machine status is accessible to multiple departments at appropriate levels of detail and complexity.
- **Enhanced confidence in machine availability**
Significantly reduces unplanned downtime and assists operators in running machinery longer and faster with greater confidence that problems will be detected before a crisis occurs.
- **Worker safety**
Supports health and safety initiatives by making it possible to collect data from unsafe or difficult to reach locations.
- **Enhanced worker satisfaction and efficiency**
Reduces the need for walk-around data collection, so highly trained staff spend less time collecting data, and more time analyzing, performing root cause failure analysis and planning.



With decades of experience and over 50,000 channels monitoring machines around the globe, SKF is the leader for on-line condition monitoring systems.



ent of critical machinery

Comprehensive solutions for unique needs

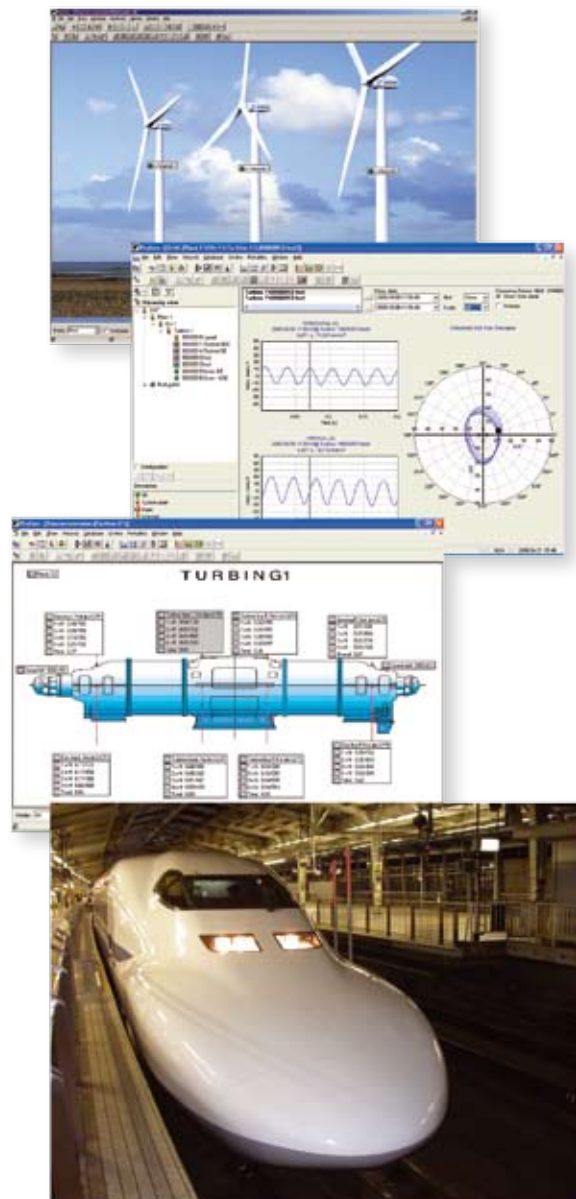
The SKF family of on-line systems includes SKF Multilog On-line system and SKF MasCon units, providing a broad selection of scalable, modular units, from single-channel to multiple-channel instruments, that can be used independently or networked for efficient information sharing. SKF also offers proven application-specific solutions for the power, paper, transportation, mining, food and beverage and other industries.

Powerful software for analysis and diagnostics

With an SKF on-line monitoring system, plant operations, maintenance and reliability personnel spend less time collecting information and have more time to analyze machine status changes, diagnose complex equipment problems and perform root cause failure analysis.

SKF “smart technology” software products, such as SKF Machine suite and SKF ProCon, make analysis easier by combining powerful data-mining technology, analytical displays and user-friendly graphics to present machine status information for a range of users. SKF software not only monitors and diagnoses various process and machine component conditions, but also prescribes appropriate action to correct existing or impending conditions.

The integrated software platform and customized interfaces allow sharing of important machine information across functional lines. Intuitive software and intelligent machine diagnostics for correct assessment of machines and processes prompts consistent and reliable decision making.



Special applications – the SKF WindCon is designed for the continuous monitoring of wind turbines and the SKF MasCon 16R is designed for the railway industry.

An integrated software platform for every

SKF Machine suite is a software program that enables the efficient management, manipulation and analysis of condition monitoring and process data. It interfaces seamlessly with the SKF @ptitude decision support system to effectively enhance the reliability maintenance decision making process.

Designed from the ground up using today's latest technologies, SKF Machine suite provides value far beyond the program's functionality. SKF has made an investment not only in the development of the software, but in understanding the analyst.

The software works the way an analyst works – providing an intuitive interface and logical work progression. New and veteran users appreciate the software's ability to practically guide the user to the next steps in the analysis process.

True networking – Allows your team to share data on any PC in the network across departments.

Reliability – The robust Oracle® relational database provides ongoing data integrity.

Interoperability – Users benefit from a common software platform for the range of data acquisition devices – from portable units to operator instruments and on-line systems.

Stability – Proven Microsoft Windows® platform and industry standard protocols result in software that functions intuitively.

Flexibility – Supports the range of SKF data collection hardware plus that of some of the world's other leading vendors.

Modular and cost-effective – Allows you to start small and add capabilities as needed.



application

The Hierarchy window displays a tree structure under 'DEMO DATABASE'. The selected item is 'FD FAN 1V-ENV'. A context menu is open over it, listing options: Plot, Alarm Details, Insert Item..., Cut, Copy, Paste, Paste Multiple..., Delete, and Properties... A secondary menu is also visible, listing: Trend, Spectrum, Time, Spectrum Waterfall, Polar Vector, Mag/Phase, and All Plots...

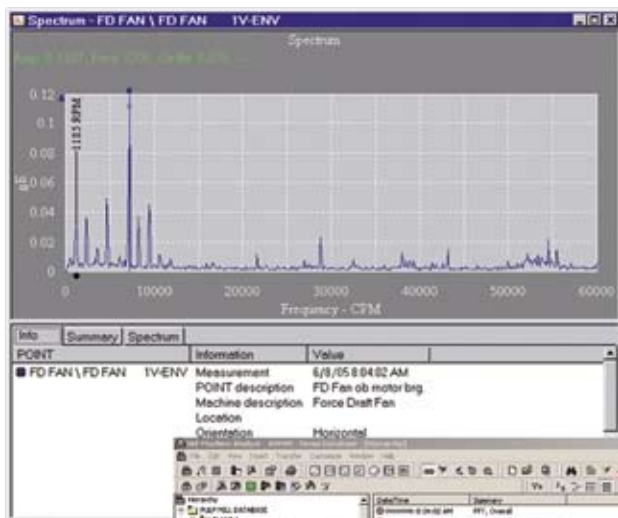
Report - New Report

Last Measurement Report
6/6/05 11:10:14 AM

WATER PUMP

Last Measurement - WATER PUMP

Machine Name	ESDID Name	Run Time	Last Value	Err. Value	% Change	Alarm State
WATER PUMP	4-HD0-#1-HD02-O	5/15/05 9:22:18 PM	0.97940	1.11050	-15	Envelope - Damage
WATER PUMP	4-HD0-#1-HD02-RFD	5/15/05 9:22:38 PM	0.372054	0.26707	40	---
WATER PUMP	4-HD0-#1-HD02-SP	5/15/05 9:22:05 PM	0.371099	0.449710	-17	Peak - Damage
---	---	---	---	---	---	Overid - Abort
---	---	---	---	---	---	Overid - Damage
WATER PUMP	4-HD0-#2-HD02-O	5/15/05 9:22:34 PM	1.03304	0.921956	11	Envelope - Damage
WATER PUMP	4-HD0-#2-HD02-RFD	5/15/05 9:22:14 PM	0.540394	0.532070	-1	---
WATER PUMP	4-HD0-#2-HD02-SP	5/15/05 9:22:44 PM	0.359709	0.407540	-18	Overid - Damage
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WATER PUMP	4-HD0-#3-HD02-O	5/15/05 9:23:44 PM	0.7612474	0.977069	-21	Envelope - Damage
WATER PUMP	4-HD0-#3-HD02-RFD	5/15/05 9:23:54 PM	0.271610	0.114444	137	---
WATER PUMP	4-HD0-#3-HD02-SP	5/15/05 9:23:34 PM	0.124091	0.130003	-8	Envelope - Damage



Group Properties

General Filter Keys Notes Images

Image: [Image]

Description: Water Pump

Browse... Export Save Undo

OK Cancel Help

The main software interface shows a hierarchy tree on the left with various data points. A configuration dialog is open, showing settings for a specific point. The dialog includes sections for 'Alarm Settings' and 'Status Values'. The 'Status Values' section shows a color-coded scale from 'Low' (green) to 'High' (red).

SKF provides a range of hardware and associated software for industry-specific systems like the SKF WindCon hardware and SKF ProCon software for wind turbine applications.

Protection: automatic machine shutdown –

SKF brings you a spectrum of machinery protection and monitoring solutions backed by decades of experience and global support.

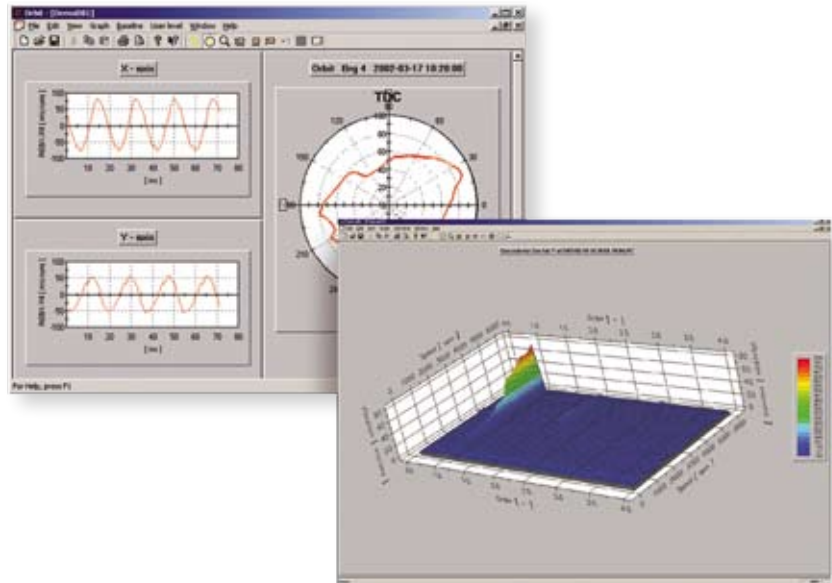
Single-point monitoring

The SKF Machine condition transmitter is a stand-alone single point monitoring device which provides low-cost continuous monitoring of specific machine, gear and bearing performance parameters in pumps, fans, motors and other general purpose machinery.

The modules take different types of measurements, for example velocity, acceleration, displacement and enveloped acceleration to provide local and remote signal

and alarm indications of system status. Red, green and amber status indicators enable operators to quickly and easily assess machine or sensor condition. The devices may also be configured to shut down machinery when programmed alarm criteria are met.

Highly cost-effective, these modules facilitate the detection of machine problems so that maintenance and repair schedules may be forecast and production can continue as planned. The devices may function independently, in connection with process control systems, or be integrated into a comprehensive condition monitoring programme.



single point or multi-channel

Multi-channel protection monitoring

Using the latest digital signal processing technology and industry-standard communications interfaces, the VM600 offers a powerful, completely integrated modular and scalable on-line solution. The VM600 system conforms to API670 standards, and provides a practical, cost-effective solution to your protection, condition and performance monitoring needs.



Fully autonomous protection systems address the problems of both excessive vibration and over-speed conditions. A single universal card accepts input from all dynamic and static sensors, and implements a comprehensive array of processing and voting logic, with analog, DC and digital shutdown outputs. The system is also capable of advanced condition monitoring and performance monitoring, including transient run-up/coast-down applications, OPC interfacing to plant control systems and tracking of key performance parameters.

The total system capability includes a full range of industrial accelerometers, velocity transducers, eddy current probes, dynamic pressure sensors, air gap sensors and ice detectors for extreme temperatures and other harsh environments.



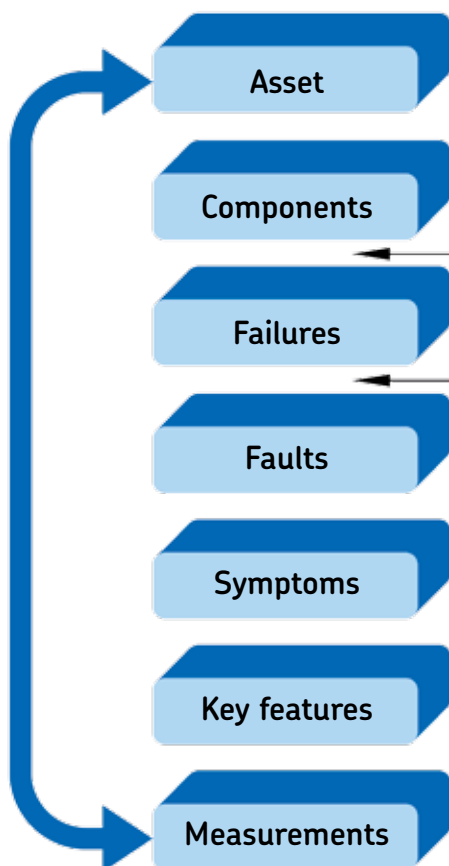
SKF @ptitude decision support system

To augment the efforts of your highly trained analysts and to facilitate optimum decision making on important plant assets, SKF has developed SKF @ptitude decision support system.

The system helps improve overall plant efficiency by replacing labor-intensive data analysis with an automated process that accepts data from SKF Machine suite and SKF ProCon software, identifies the probability of specific faults within an asset or process and then prescribes appropriate action.

The system helps to answer the following questions:

- What is the problem?
- How serious is it?
- What should be done about it – and when?
- What are the potential risks to productivity, quality, worker safety and environment?



In addition to linking with Machine suite and ProCon, @ptitude links with a range of data sources including process and distributed control systems, Computerized Maintenance Management Systems (CMMS), Enterprise Resource Planning (ERP) and other engineered solutions.

Users can also customize the system to reflect internal processes and procedures to help ensure consistency and standardization within a single plant or across multiple facilities. This also allows you to capture, retain and benefit from the knowledge of your most seasoned professionals. By fusing knowledge from diverse sources, @ptitude provides the information essential to effective machine and process analysis, diagnosis, reporting and corrective action.

@ptitude enables a proactive approach to reliability by identifying faults and resolving symptoms before they result in failures.

Extensive support ... whenever and wherever

An assortment of support resources are available from SKF to help you get the most from your condition monitoring products.

Ask about availability in your area.

SKF condition monitoring product support plans – A key component of SKF's commitment to providing the best customer and product support in the industry, product support plans add additional value to your product purchase. Select from different options and receive the support and enhanced benefits that can make the difference in your programme. From discounts for upgrades to complimentary annual calibrations, loaner units during product repair and battery replacement, product support plans help protect your product investment.

Technical support – For your more extensive technical questions, contact our expertly-trained technical support group. The team is available to answer your most perplexing product questions. Visit www.skf.com/cm_technical_support to learn more.

User help – Products come with a variety of help tools from on-board, context sensitive help to QuickStart guides and comprehensive user manuals.

On-line support – Visit our website at www.skf.com/cm for more information on our products and services. Our SKF @ptitude Exchange Forum at www.skf.com/forum, provides an opportunity for ongoing knowledge exchange with professionals from around the globe. Or review our extensive collection of technical information and application notes available in the Inquire database. For your reliability-related questions, subscribe to @ptitude Exchange to access a wealth of reliability information including machine diagrams, benchmarking data and more.

Training – The SKF Reliability Maintenance Institute (RMI) offers a comprehensive range of training courses designed to help plants eliminate machinery problems and achieve maximum reliability and productivity. RMI On-line is available through @ptitude Exchange and offers self-learning modules designed to introduce participants to subjects and prepare them for intermediate and advanced level courses.

For more information about how SKF can create a customized condition monitoring programme to maximize your plant productivity and optimize your asset efficiency, contact your local SKF representative. Or visit our website at: www.skf.com/reliability.

Real world reliability success stories: bottom



Pulp and paper

A major paper mill experienced frequent and unexpected failures of critical machinery. These failures not only encouraged a reactive maintenance culture but also caused significant operational reliability problems. As a result, mill production was well below capacity, and waste rates high, adding up to a loss of millions of dollars.

In addition to a total mill assessment, the SKF solution included condition monitoring services to pinpoint failure-causing points.

As a result, the mill was able to reduce unplanned downtime by 70 % and reduce the waste rate by 30 %. In addition, the improved reliability led to record production rates. The successes reinforced the proactive cultural changes that occurred. The total positive impact for the mill is \$ 1 200 000 and counting.



Petrochemical

A chemical processing facility decided to incorporate their operators into the plant reliability programme. They saw an opportunity to improve the overall reliability of the plant by increasing the responsibilities of their operators. Challenges included unscheduled downtime for assets caused by premature and random bearing failures.

Through SKF, the plant initiated an Operator Driven Reliability (ODR) programme which, among other strategies, incorporated periodic condition monitoring technology to enable the process and provide ready access to reliability data.

The customer realized immediate success from the improved structure, which increased fan reliability and led to increased productivity and lower costs, saving nearly \$ 1 000 000 each year.

line results

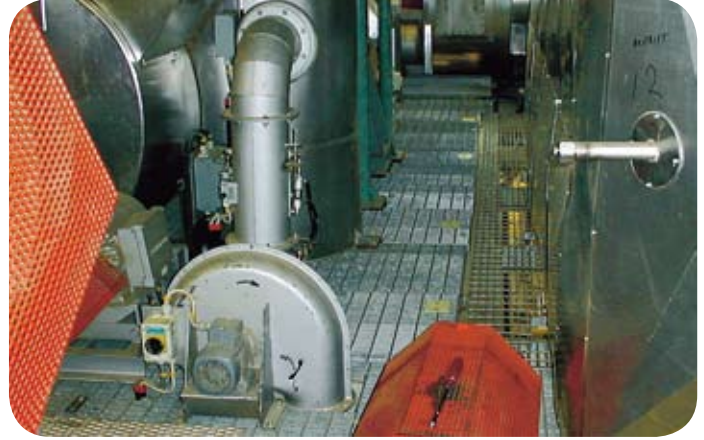


Cement manufacturing

A plant was experiencing early and unexpected failure on eight critical fans, which caused kiln production to stop and reduced the output of the mill. On average, a failure occurred every month. Fan failure was costing thousands of dollars in lost production and maintenance costs.

A complete SKF Machine Reliability Assessment (MRA) was conducted on the fan system. This included a comprehensive analysis of the fan system, including bearings, lubrication and maintenance practices. Using Key Performance Indicators (KPI) to define and measure results, SKF created a customized solution built around technologies, processes and culture shift.

The customer realized increased fan Mean Time Between Failure (MTBF) by eliminating all failures. After 12 months, mill uptime had increased, resulting in \$ 450 000 more product to sell (\$ 80 000 more profit) and maintenance savings of \$ 150 000. The total impact on profits was \$ 230 000.



Food processing

A large food processing plant was using five fans of similar design with no problems with four of the fans during the five years they were in place. The fifth fan was a constant problem. Unexpected failures caused 1,5 hours of downtime while airflow was diverted and other production issues sometimes accompanied fan failure. The additional maintenance increased plant operations costs. Losses were as high as \$ 120 000 for just one failure. After attempting several "fixes," the client looked to SKF for assistance.

The SKF solution was a complete Machine Reliability Assessment (MRA) of the fan system, including bearings, lubrication, motor, fan base, structure, ducting and maintenance practices. Using advanced technology such as Operating Deflection Shape (ODS) analysis, SKF gathered and analyzed multi-parameter data on which to base recommendations for bearing and lubrication areas incorporating new technology.

The customer realized success from the improved structure, which reduced fan vibration. Increased fan reliability led to increased productivity and lower costs, saving the plant over \$ 120 000 and counting.

Let SKF customize a programme for you

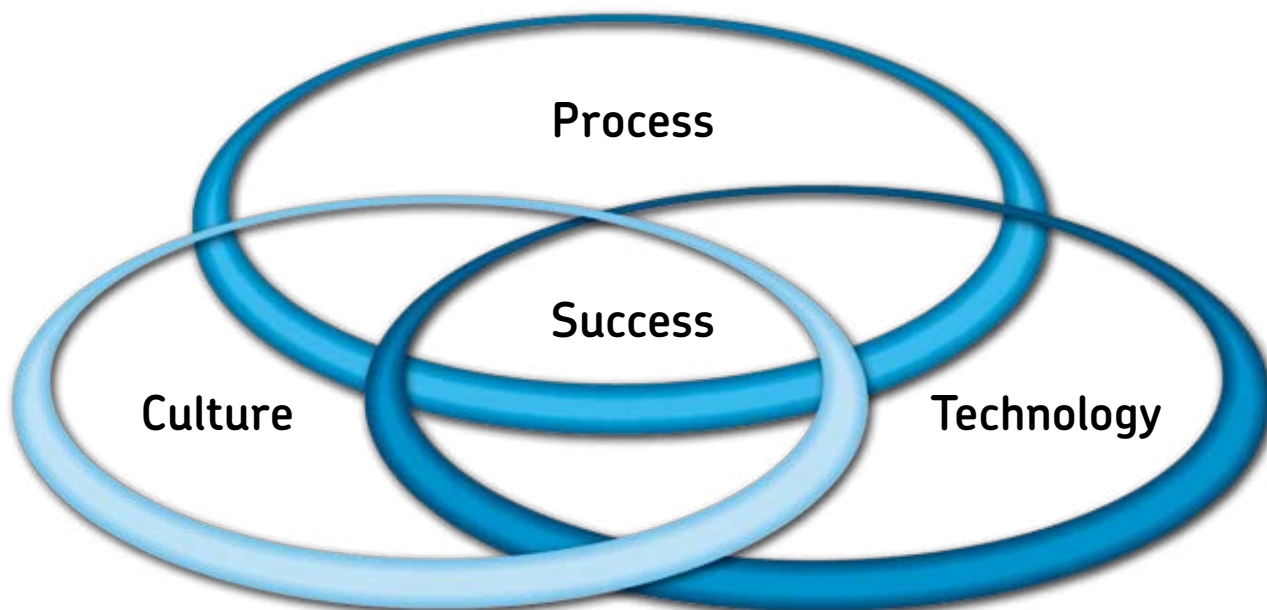
The real-world experiences of SKF cover a multitude of industries. These experiences show that achieving competitive productivity and increased profitability through machine asset management depends on a balance of key factors:

Corporate culture – It is important to have a culture that is willing to embrace changes and the need for change. Change often involves a shift in responsibilities among plant personnel, which means a company must be willing to invest the resources to re-train employees and bring them emotionally and intellectually into the culture.

Technology – Successful companies use technology as a tool to facilitate improvements in products and productivity. In addition, they commit the financial, educational and personnel resources necessary to make the best use of new and emerging technology initiatives.

Processes – To be most effective and to achieve long lasting results, technology must be supported by updated and enhanced processes. In the case of plant asset management, incorporating new technology into the data collection, knowledge management and decision-making processes is critical to achieving success.

Viewing reliability maintenance from the asset management standpoint means that all improvements are important, and can be made at any and all levels of the plant. Whatever your current plant asset management strategy, SKF has the knowledge to help you identify the areas that can be improved to help you meet your company's business objectives.



Assessment – SKF can analyze your existing supply, maintenance and/or predictive maintenance procedures to identify areas and make recommendations for improvement.

Training – SKF can train your staff to make the most effective use of new tools and techniques for collecting and interpreting data.

Maintenance strategy – SKF can help you prioritize activities based on the relative importance of each asset. We can help to design a Reliability Centered Maintenance (RCM) programme that is efficient, cost-effective and results-oriented.

SKF products – SKF offers a wide range of maintenance tools and lubricants, from laser alignment tools to automatic lubricators, designed to optimize machine uptime.

SKF services – SKF offers a wide range of services, from maintenance engineering to high skill machine maintenance, available as complete, turnkey solutions or individually, as fits your specific needs. SKF asset management specialists can help you assess your needs, develop strategies, and implement any of a proven array of SKF programs including:

- Proactive Reliability Maintenance
- Operator Driven Reliability
- Integrated Maintenance Solutions

Technology upgrades – SKF engineers can help enhance the productivity and reliability of existing machines by incorporating the latest component designs and solutions.

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