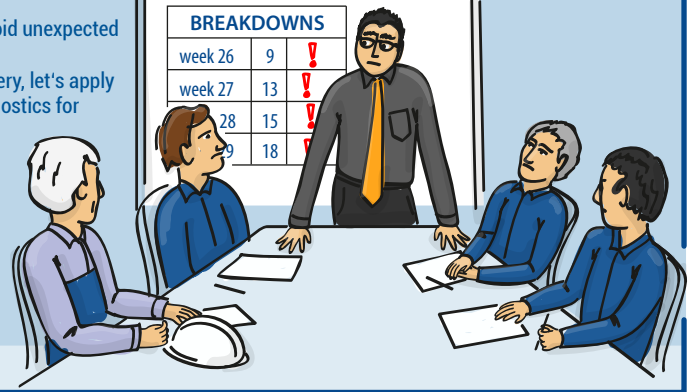# WATCH THE MACHINE FAULT TRENDS
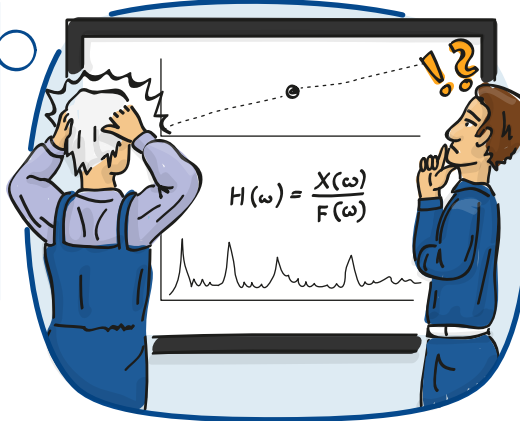
not
THE VIBRATION TRENDS

We need to avoid unexpected breakdowns on our machinery, let's apply vibration diagnostics for evaluation of machine condition.

BREAKDOWNS		
week 26	9	!
week 27	13	!
28	15	!
9	18	!

We don't have any experience. How should we evaluate vibration?
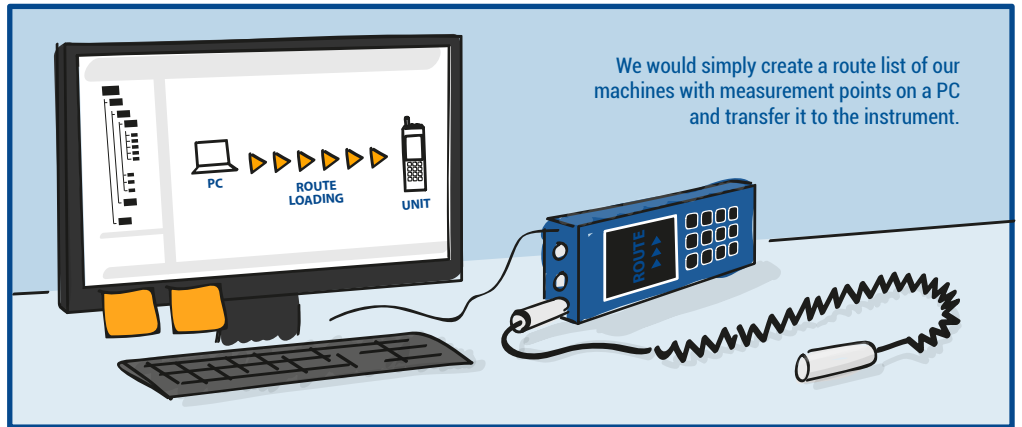
$$H(\omega) = \frac{X(\omega)}{F(\omega)}$$

There is an instrument on the market that can help with diagnosing vibration faults.

It can directly evaluate fault severity.

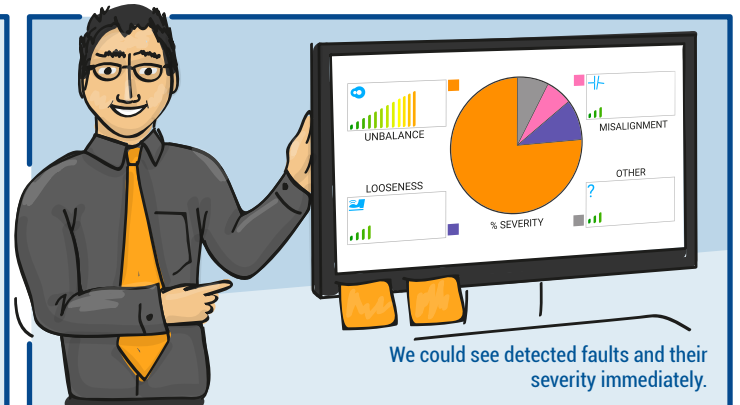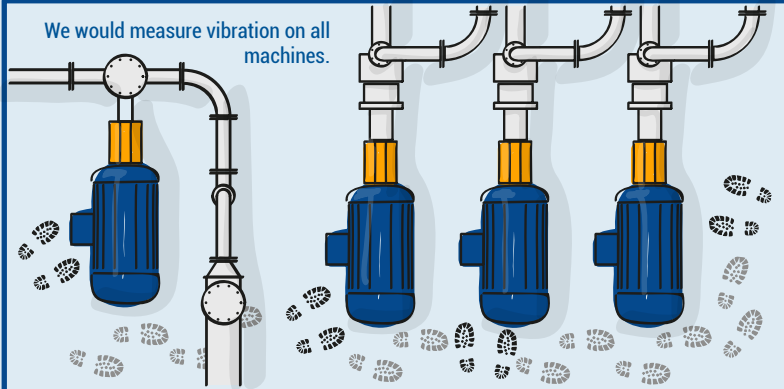There is a dangerous defect found on the machine. Unbalance found

PC
ROUTE LOADING
UNIT

ROUTE

We would simply create a route list of our machines with measurement points on a PC and transfer it to the instrument.

We would measure vibration on all machines.

UNBALANCE
LOOSENESS
MISALIGNMENT
OTHER
% SEVERITY

We could see detected faults and their severity immediately.

UNBALANCE
LOOSENESS
MISALIGNMENT
BEARING

After a few measurements, we could begin to trend fault development.

It is shame we were postponing it. There was nothing to worry about.

BREAKDOWNS		
week 35	2	OK
week 36	1	OK
week 37	0	OK
week 38	1	OK

TAKE THE NEXT STEP WITH ADASH
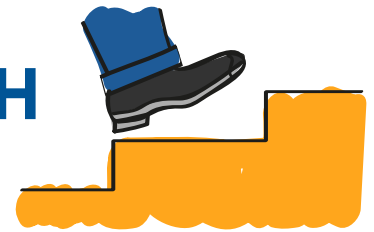
Watch the fault severity trends, not the vibration trends.

The Adash Company introduces a new approach to vibration analysis. All of us in the vibration world used the same concept in the past. For detection of faults we used overall measurements and then spectra, time waveforms etc. for deeper analysis. After that, we derived the severity of faults for each machine.

Why waste time with overalls and spectra?

At Adash we have been developing the expert system FASIT for many years. This system enables us to directly measure fault severity based on vibration. The vibration data is the input, and fault severity diagnosis is the output.

The FASIT method is available in all Adash instruments.

You can save the data to the DDS database and then view fault severity trend graphs. In the past you could only view trends of overall values.

A4900 Vibrio

A4300 VA3

A4400 VA4

The DDS software can be widely used by all maintenance staff, not only by vibration experts.

This new approach opens the DDS data for a much larger group of users. When DDS graphs were only about vibration, then only vibration analysts really used it and had to create severity reports manually. Now these reports are available directly from the DDS software. This means that the DDS software can now be used by individuals who work not only in maintenance, but also in production or financial departments.

Faults Severity Report 2016-09-02

Machine	Last Measurement Date	Fault	Severity	Alarm
Line 1\Pump	2016-08-28 12:26:05	Unbalance	77%	
Line 2\Motor	2016-08-23 8:13:14	Unbalance	82%	
Line 2\Gearbox	2016-07-21 9:55:00	Looseness	51%	
Line 4\Motor	2016-08-01 11:14:57	Misalignment	99%	
Line 7\Motor	2016-08-15 10:45:31	Looseness	60%	
Line 9\Gearbox	2016-08-16 14:44:13	Unbalance	85%	
Line 9\Pump	2016-07-21 9:17:01	Unbalance	62%	

MASTER THE LANGUAGE OF YOUR MACHINERY

Adash

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