

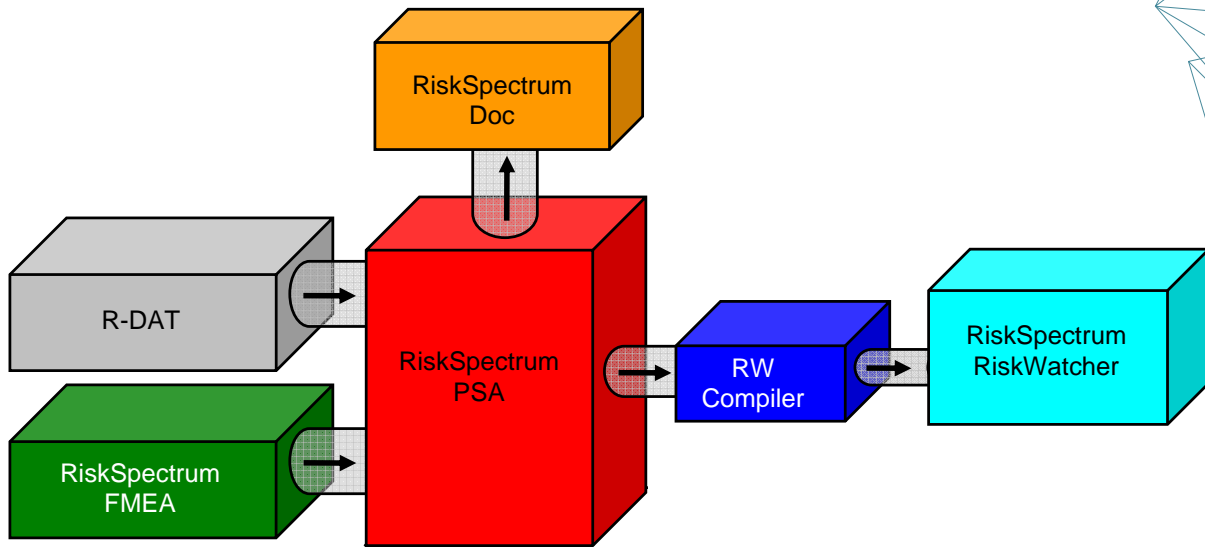


SCANDPOWER
Risk Management

Relcon Scandpower AB
Box 1288
Sundbyberg

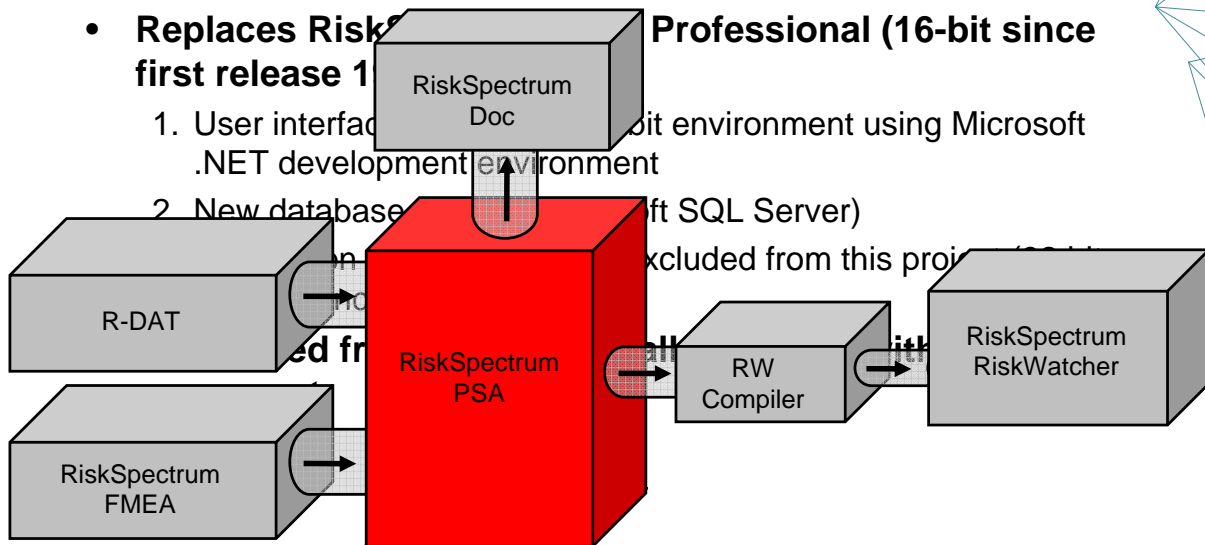
Relcon Scandpower
RiskSpectrum Software
13-14 November 2007
Open PSA Osaka, Japan

The RiskSpectrum Software Family



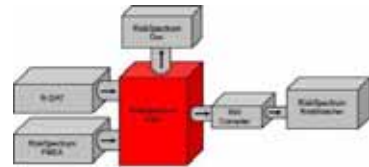
RiskSpectrum PSA (.NET version)

- **Replaces RiskSpectrum Professional (16-bit since first release 1)**



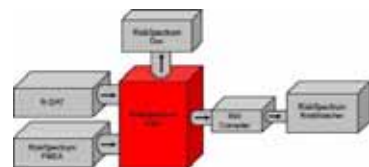
1. User interface moved from 16-bit environment using Microsoft Visual Studio to .NET development environment
2. New database engine (Microsoft SQL Server)

RiskSpectrum PSA (.NET version) - Latest News



- Final delivery from SPAN (India) made beginning of October '06
- Relcon Scandpower develops filter, CCF generation, protection system
- Delivery of beta version January 2007
- Relcon Scandpower formal testing started 15 February 2007
- Release: 2007

RiskSpectrum PSA (.NET version) - Demo



New features:

- More than one result window at a time
- Graphical display of basic events with exchange events
- TRUE/FALSE and Tag colour indication in FT
- Easier to add consequence to sequence in the event tree editor
- "Quick Filter" in record lists
- Tag by date
- Propagate Tag
- Save Tag info to file

RiskSpectrum PSA (.NET version) - Demo, cont.



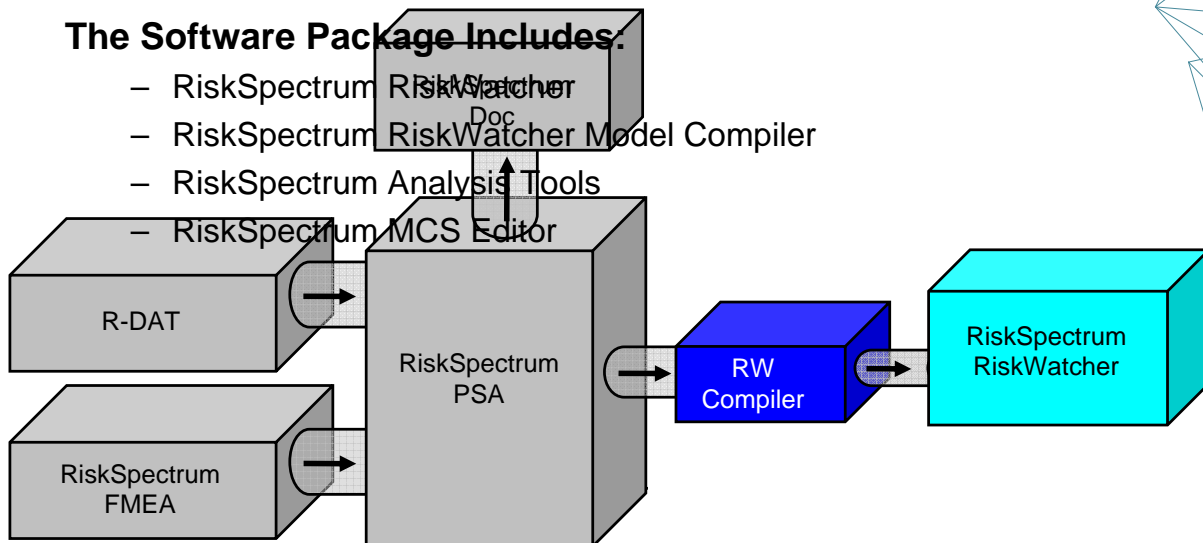
More New features:

- Edit, Review and Approve
- Undo
- Lock/freeze model
- Project Options
- Password
- Server keys
- Improved performance

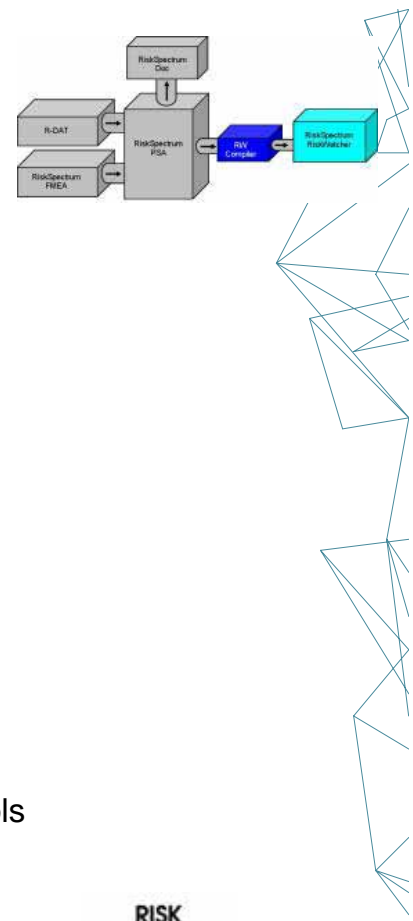
RiskSpectrum RiskWatcher

The Software Package Includes:

- RiskSpectrum RiskWatcher
- RiskSpectrum RiskWatcher Model Compiler
- RiskSpectrum Analysis Tools
- RiskSpectrum MCS Editor



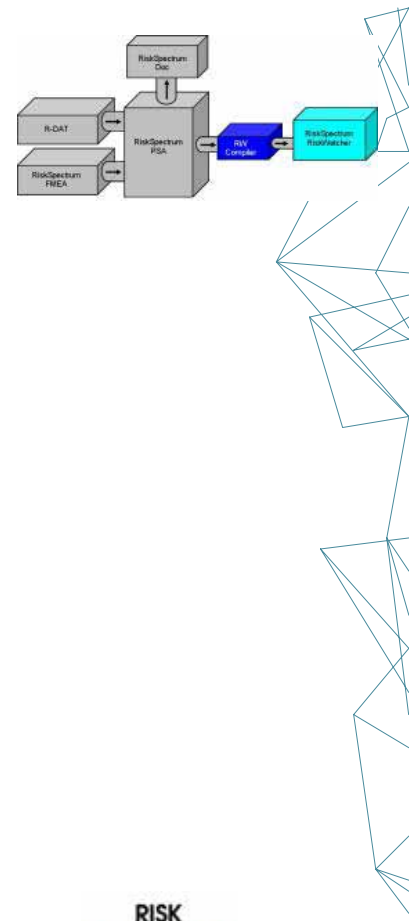
RiskSpectrum RiskWatcher



Input:

- **Plant Model**
 - PSA Model
 - Deterministic Model (D-in-D)
 - Systems and Component Mapping
- **Event History Log**
 - Events that are planned & that have occurred
 - System Configuration
 - Component Unavailability
 - Plant Operating Modes
 - Environmental Factors
 - It is possible to import information from other tools

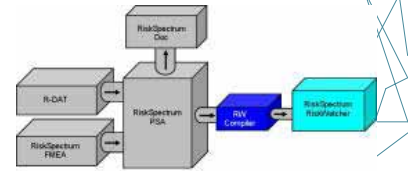
RiskSpectrum RiskWatcher



Output (Results):

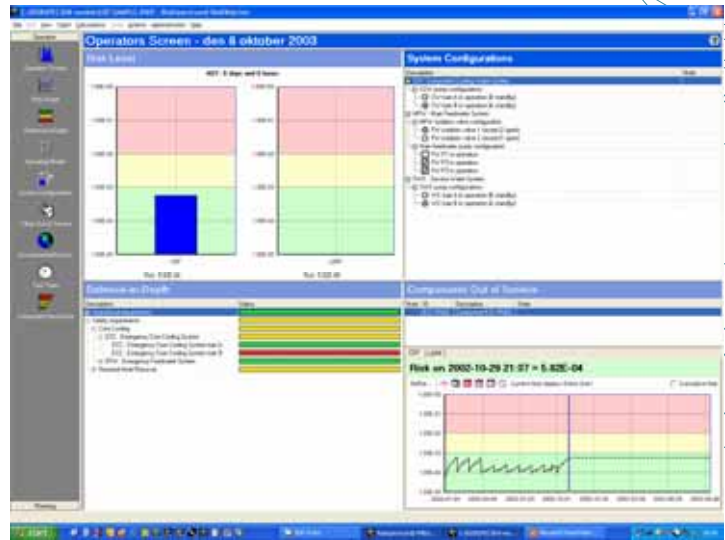
- **Support On-line Decision Making**
 - Risk Status
 - Probabilistic
 - Deterministic (Defence in-Depth)
 - Allowed Outage Time in Current Configuration
 - Risk Profile
 - Risk Importance
- **Planning and Follow-up (experiences)**
 - Risk Status and Profile
 - Probabilistic
 - Deterministic (Defence in-Depth)
 - Comparison of Different alternatives
- **Risk Log**

RiskSpectrum RiskWatcher

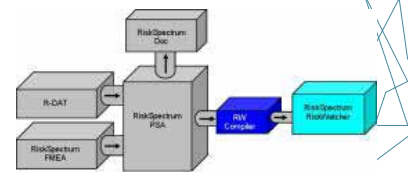


The Operators Screen

- 7 dockable windows
 - Risk Level
 - Defence-in-Depth
 - Components out of Service
 - System Configurations
 - Plant Operating Mode
 - Environmental Factors
 - Risk Graph

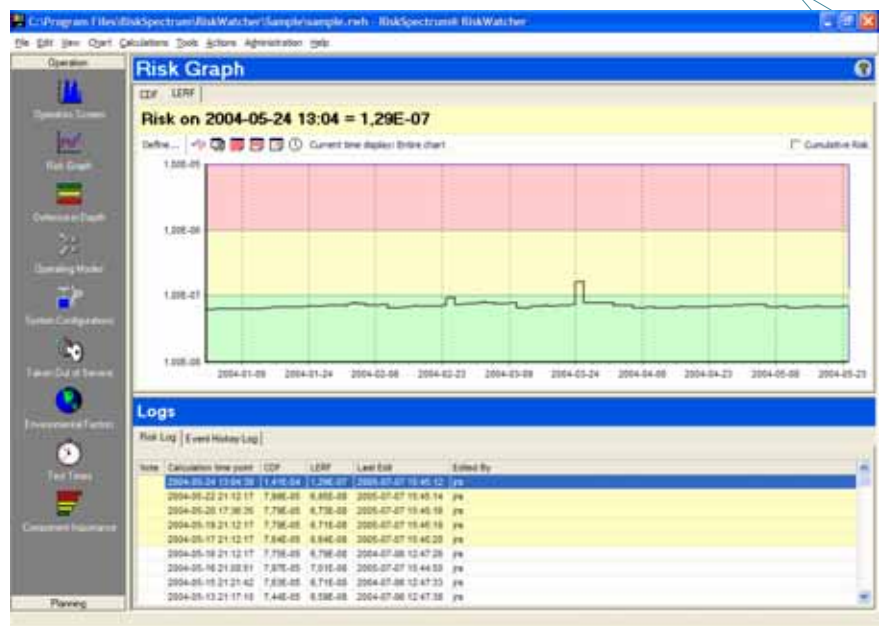


RiskSpectrum RiskWatcher

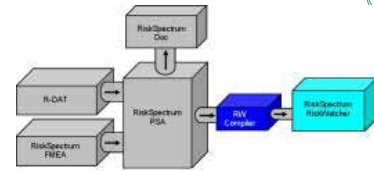


Online Risk:

- Risk Curve
- Risk Log
- Event Log

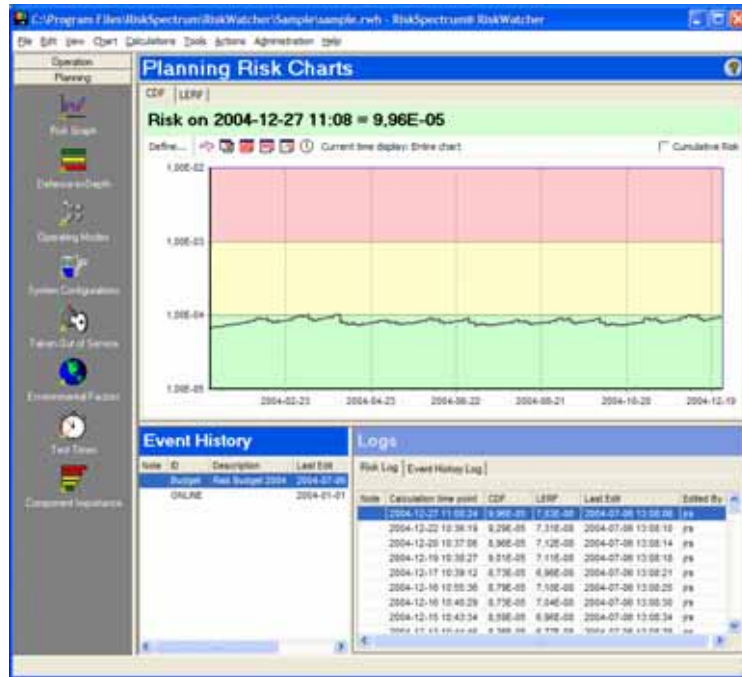


RiskSpectrum RiskWatcher

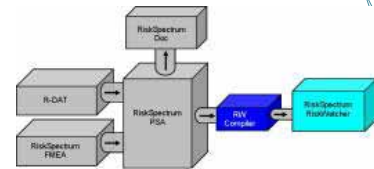


What-If analyses:

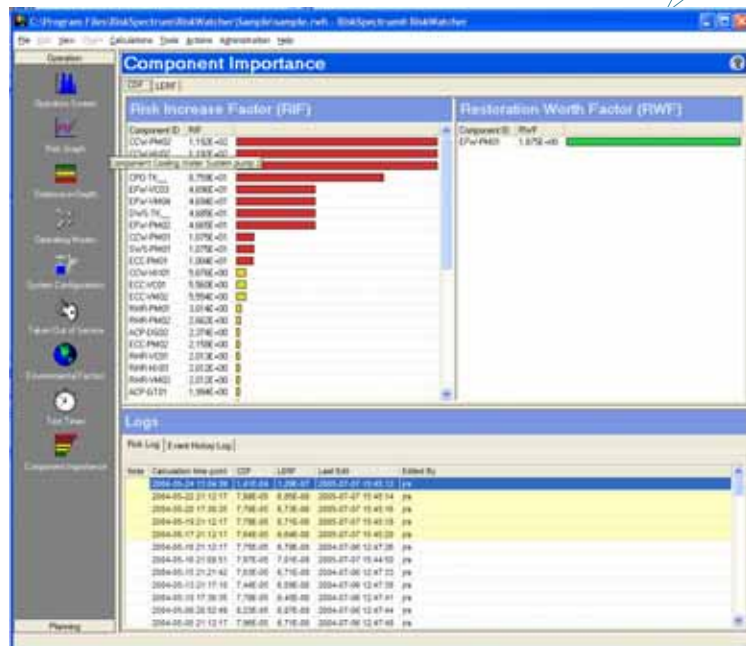
- History
- Future
- ONLINE



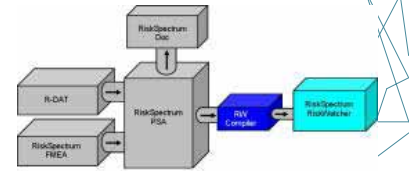
RiskSpectrum RiskWatcher



Component Importance:

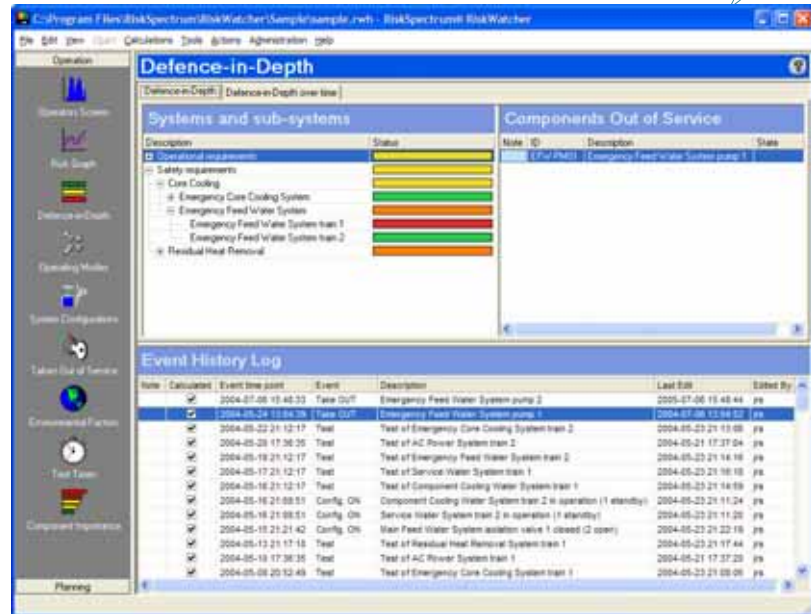


RiskSpectrum RiskWatcher

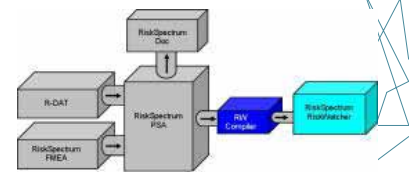


Defence-in-Depth:

- **System/Barrier**
 - Available
 - Degraded
 - Yellow
 - Orange
 - Unavailable

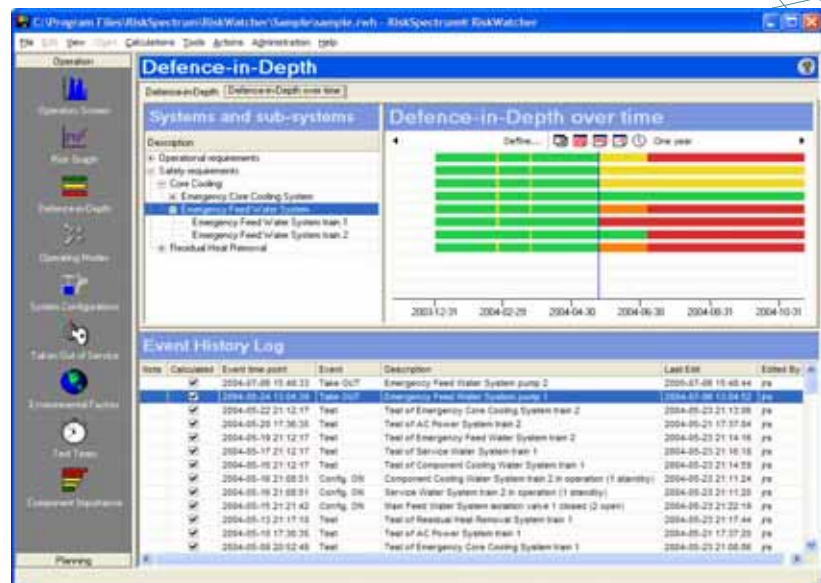


RiskSpectrum RiskWatcher



Defence-in-Depth Over Time:

- **System/Barrier**
 - Available
 - Degraded
 - Yellow
 - Orange
 - Unavailable



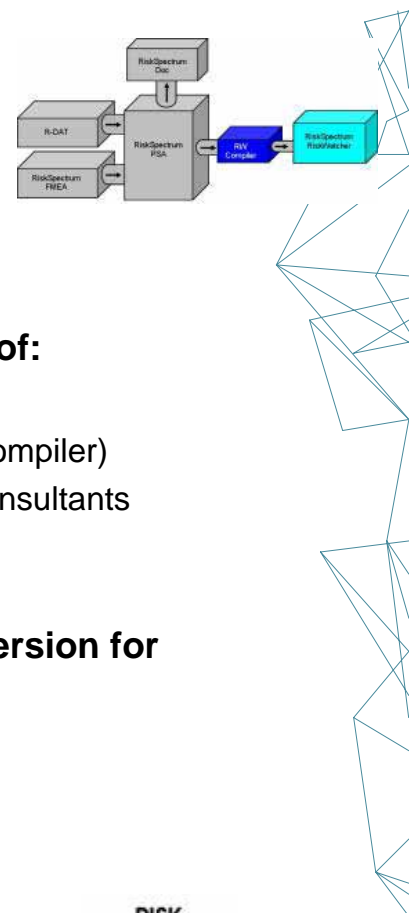
RiskSpectrum RiskWatcher



Summary:

- **RiskSpectrum RiskWatcher has the capability of:**
- **Planning and risk follow-up**
 - Evaluate risk for planned activities
 - Evaluation of experience
 - Determine best strategy
- **Monitoring online risk**
 - Probabilistic
 - Deterministic
- **Support decision making**
 - Importance factors
 - Defense in-depth (Tech.Spec. information)
- **Presentation of risk history**

RiskSpectrum RiskWatcher



Summary (cont.)

RiskSpectrum RiskWatcher has the capability of:

- **Support Living PSA (configuration control)**
 - The PSA model is the RM model (run through compiler)
 - Easy to convert model – can be done without consultants
 - Deterministic model is part of PSA model
 - The model can be kept living!
- **Fast calculation engine: RSAT (enhanced version for RW)**

www.scandpower.com

