Novartis Enterprise Risk Management

Risk management is an essential part of our Ethics, Risk & Compliance organization (ERC)

Chief Ethics, Risk & Compliance Officer
Klaus Moosmayer

ERC Pharma
ERC Oncology
ERC AveXis
ERC Research & Development
ERC Novartis Technical Operations (NTO)
ERC Sandoz
ERC Novartis Business Services (NBS)

Corporate Financial Compliance
Financial Reporting & Accounting Controls & Compliance
Information Security & Risk Management
Quality Compliance
People & Organization Risk & Compliance
Data Privacy Risk Management

ERC Communications
ERC People & Organization

1 Member of Executive Committee of Novartis
Novartis Enterprise Risk Management
Risk management is an essential part of our Ethics, Risk & Compliance organization

1 Mission
Safeguard Novartis from risks, so that we can reimagine medicine

3 Areas
Risk & Crisis Management
Policies & Controls
Monitoring & Remediation

6 Teams
Enterprise Risk Management
Enterprise Policies
Risk & Internal Control
Central Monitoring
Remediation

Chief Ethics, Risk & Compliance
Klaus Moosmayer

Head: Jan Hansen

1 Member of Executive Committee of Novartis
Novartis Enterprise Risk Management

Our process to manage risks at Novartis

Novartis is adopting a full cycle of Enterprise Risk Management

Effective risk management requires the development and implementation of mitigation activities, which must be monitored on a regular basis.

Risk management can also create opportunities to identify key strengths and build on them to define better processes and support the business more effectively.

- Novartis Risk Universe covering 17 risk areas
- Previous risk assessment results
- Risk leadership roundtable discussion
- Monitor risk mitigation progress quarterly for top risks and every 6 months for all others
- Review of risk status central by ERM team
- Novartis Enterprise Risk Management Tool
- Risk Reporting to the Executive Committee of Novartis
- Quarterly and Year-end reporting to Risk Committee of the Board of Directors
- Promote risk awareness
- Reiterate risk ownership
- Support decision-making

Stage 1: Risk identification

- Avoid: Not to start or continue with the activity that creates the risk
- Pursue: Take or increase the risk in order to pursue an opportunity
- Reduce: Define & execute an action plan to reduce likelihood and/or impact to a target level for the Novartis Risk Unit within a defined period
- Share: Transfer all or part of the risk externally
- Accept: Retain the risk by informed decision

Stage 2: Risk analysis

- Risk likelihood
- Risk impact
- Determination of risk exposure

Stage 3: Risk evaluation

- Risk workshops
  - At country
  - By BU/div/role/unit
  - By corporate function
  - Annual consolidation

Recording & reporting

Communication & consultation

Monitoring & review

Risk treatment

Risk assessment

Scope, Context, Criteria

Stage 4: Communication & consultation

- Ethics, Risk & Compliance - Risk & Resilience

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Novartis Enterprise Risk Management

Our evaluation method is a 5x5 matrix in combination with the Novartis Risk Compass that helps us to prioritize our risks and set the focus.

**5x5 Risk Matrix**

- **Likelihood**
  - Very High
  - High
  - Medium
  - Low

- **Impact**
  - 1: Insignificant
  - 2: Minor
  - 3: Moderate Impact
  - 4: Major
  - 5: Severe

**Novartis Risk Compass**

- **Strategic Risks**
  - Risks that are most consequential to Novartis ability to execute its strategy or achieve its business objectives.

- **Operational Risks**
  - Risks resulting from inadequate or failed internal processes and/or systems, employee errors or from external events.

- **Emerging Risks**
  - Identified risks that require close monitoring, which may evolve to a significant Operational or Strategic Risk.

- **Awareness Topics**
  - Trending topics that are not accounted by Novartis risk management yet, but have the potential to become a new risk.
Novartis Risk Compass 2019
Our top risks from last year

**Strategic Risks**
1. Pricing pressure including transparency and access
2. Failure to deliver key commercial priorities and future growth drivers
3. Organizational, structural and cultural changes

**Operational Risks**
1. Cybersecurity breaches and catastrophic loss of IT systems
2. Third party management & oversight
3. Retaining key talents

**Emerging Risks**
1. Product counterfeiting
2. Use of Social Media and interactive internet platforms
3. Due Diligence approach and integration of M&As

**Awareness Topics**
1. Increasing voice of Environmental, Social & Governance Investors
2. Escalation of geo- and socio-political threats
3. Climate change and associated increase of major natural disasters

Comment: For details regarding the Novartis Risk Compass see page 5