

Influencing Productivity through H&S culture and behaviour development in GKN Driveline Slovenija d.o.o.



CVJ Systems



AWD Systems



Trans Axle Solutions



eDrive Systems

Personal presentation

Andrej Poklič

- > Bachelor of Mechanical Engineering
- > Married, two children

Working experiences:

- > 1993 – 2005 Responsible for production, ME, Maintenance,..
- > 2005 – 2006 Member of board of Directors
- > 2006 - Managing Director

Free time

- > Family, skiing and cycling

Contact


[e-mail: Andrej.poklic@gkndriveline.com](mailto:Andrej.poklic@gkndriveline.com)

GSM: + 386 41 380 648





GKN Group at a glance



**Every day at GKN,
we drive the wheels of hundreds of millions of cars,
we help thousands of aircraft to fly,
we deliver the power to move earth and harvest
crop and we make essential components for
industries that touch lives across the globe.**

GKN at a glance

GKN Driveline



- > World leading supplier of automotive driveline systems & solutions
- > Focussed on solutions that create weight, space and fuel savings
- > Committed to innovation

GKN Powder Metallurgy



- > World leader in the manufacture of sintered components
- > Manufactures precision automotive, industrial and consumer products
- > Largest powder producer in North America

GKN Aerospace



- > Supplier to the global aviation industry
- > Leader in the manufacture of highly complex composite aero structures and engine products
- > Developer of fuel efficient solutions to lower emissions

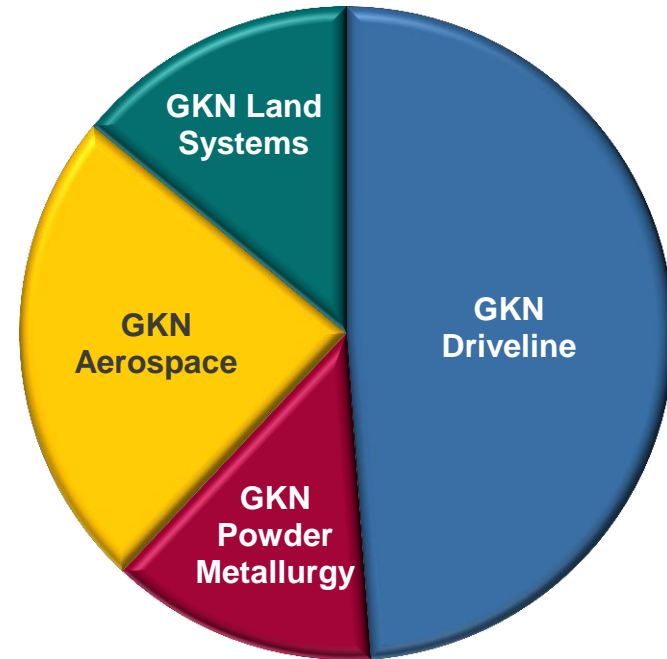
GKN Land Systems



- > Supplier to the global agricultural, construction, mining and other industrial markets
- > Innovation within renewable energy and mass transit solutions
- > Global aftermarket distribution and service

GKN at a glance

- > 48,000 people
- > Global footprint – 40 countries
- > Market leading businesses
- > Above market growth
- > Operational excellence



GKN 2012 Sales

£6.9bn \$US 10.4bn €8.1bn

GKN Driveline

driving tomorrow's technology



CVJ Systems



AWD Systems



Trans Axle Solutions



eDrive Systems

GKN Driveline

- > Largest business of global engineer GKN
- > Market leading driveline technologies
 - CVJ Systems
 - AWD Systems
 - Trans Axle Solutions
 - eDrive Systems
- > Broadest global footprint
- > Established long term global relationships
- > Focussed engineering resource providing driveline solutions
- > Expert customer specific account teams



CVJ
Systems



AWD
Systems



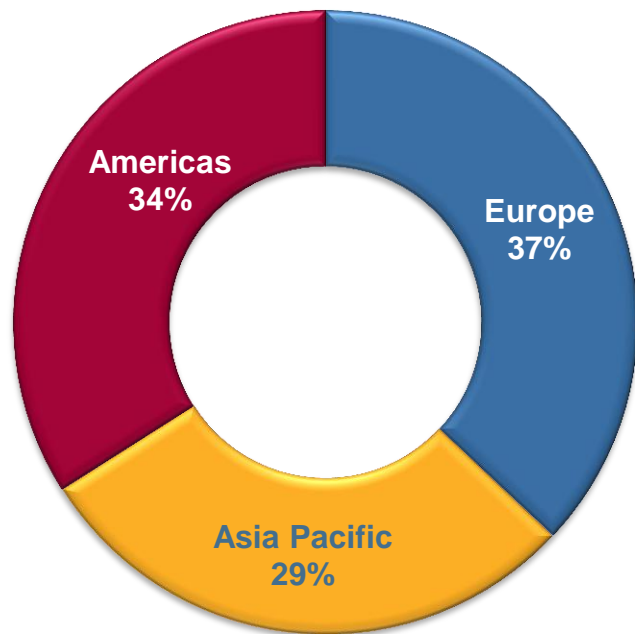
Trans Axle
Solutions



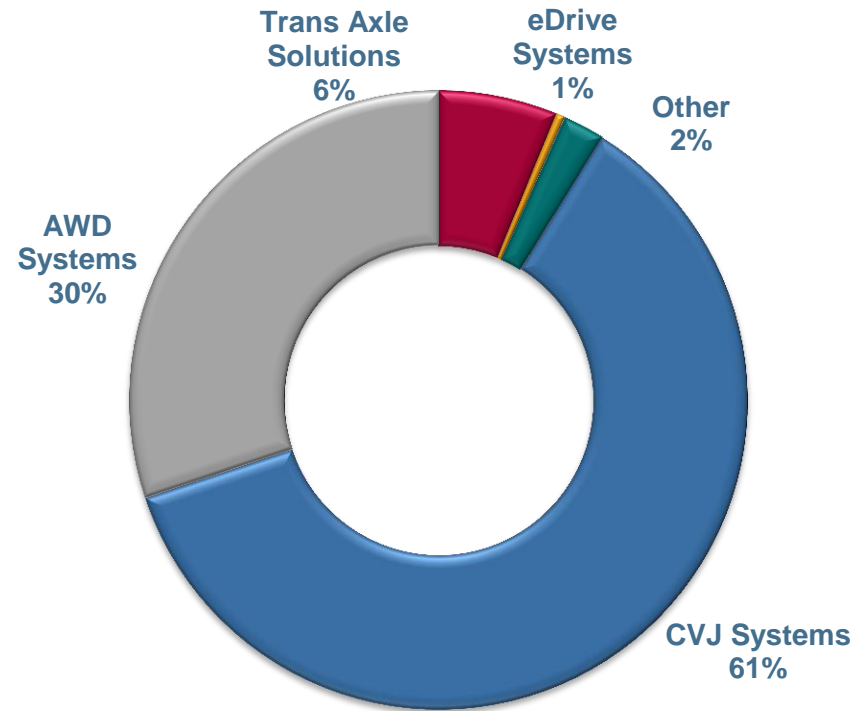
eDrive
Systems

GKN Driveline – Sales 2012

£3,236m US\$5,000m €4,000m

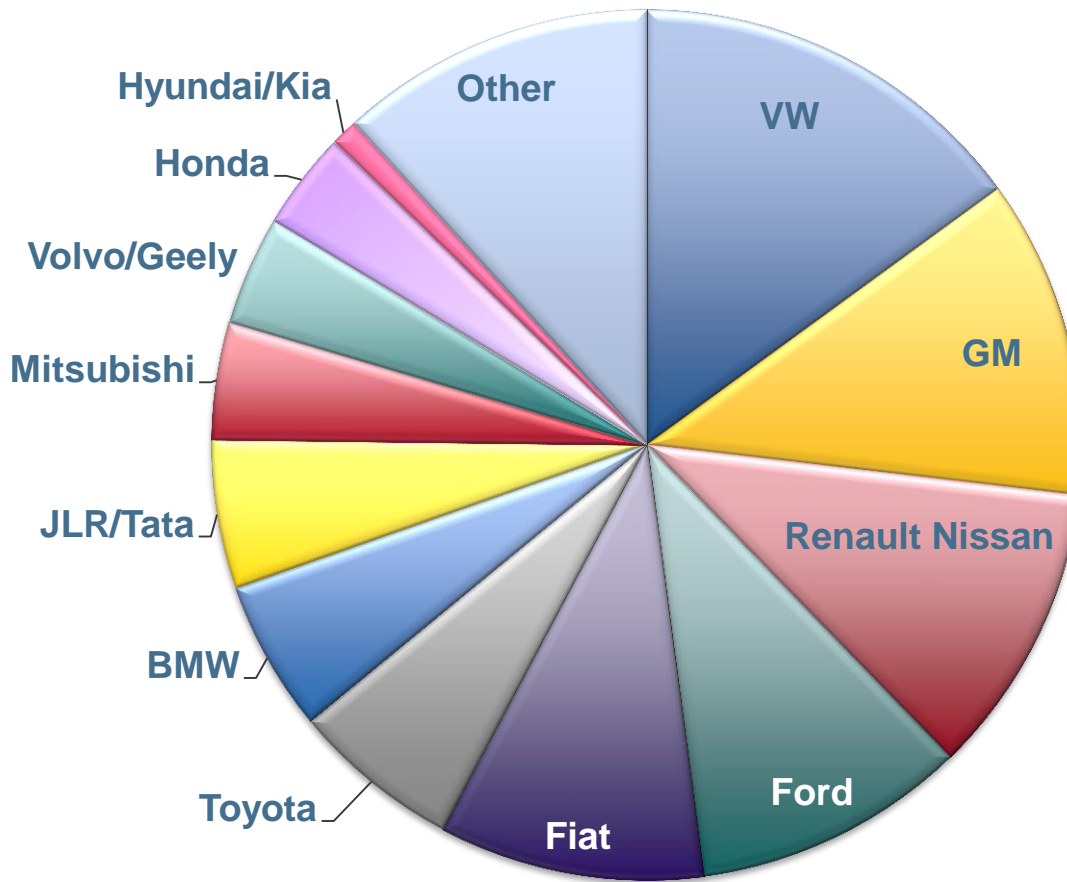


by region of origin



by product segment

GKN Driveline – sales by customer 2012



GKN Driveline – An excellent global footprint

GKN Driveline
end-2012

£3.24 billion
Sales

c.22,000
Employees

45 Manufacturing
Plants
21 Countries



GKN Driveline – product segments

CVJ Systems



CVJ
Systems

- > CV Joints
- > Sideshafts

AWD Systems



AWD
Systems

- > Propshafts
- > Transfer Units
- > AWD Couplings
- > Disconnects
- > Final Drive Units

Trans Axle Solutions



Trans Axle
Solutions

- > Differentials
- > Limited Slip & Locking Differentials

eDrive Systems



eDrive
Systems

- > eAxles
- > eTransmissions
- > eMotors

GKN Driveline – CVJ Systems

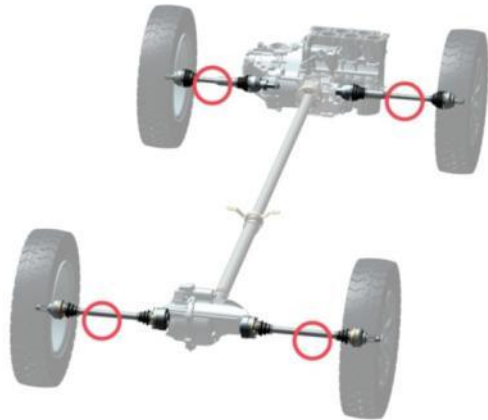


CVJ
Systems

efficient thinking

the technology leader in CVJ sids shafts

- > weight, space and fuel savings
- > improved efficiency
- > solutions provider
- > most extensive range of CVJs
- > widest global footprint
- > manufacturing CVJs in 20 countries



Fuel saving technology

countertrack™ CVJ

- > smallest
- > lightest
- > most efficient



countertrack
GKN TECHNOLOGY



Maximised performance

Ballspline system

- > maximise offroad angle & movement
- > Reduce NVH



High performing, economic solutions

Twinball (ST) joint with Face Spline

- > 50% higher torque transfer
- > 54 degree articulation – tightest turning
- > reduced assembly time & backlash



Innovative shaft solutions

Sids shaft for low cost vehicles

- > Designed to meet customer requirements
- > Reduced complexity
- > Floating shaft – no performance compromise



GKN Driveline – AWD Systems

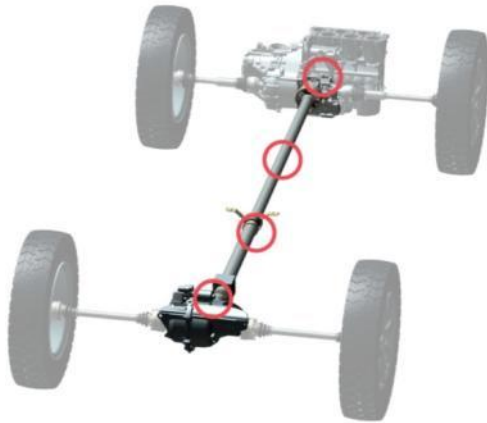


dynamic thinking

AWD Systems

the global leader in efficient all-wheel drive systems

- > unique capability to develop and manufacture full AWD Systems
- > world-class engineering over many years
- > optimised components through full system understanding



Reduces everything but performance

DTF propshaft interface

- > reduces weight
- > reduces assembly time
- > reduces packaging space
- > reduces system costs



AWD Disconnect

Power Transfer / Rear Drive Unit

- > seamless engagement to AWD mode
- > no compromise all wheel drive
- > improved efficiency
- > expert all wheel drive capability



Performance AWD

TWINSTER®

- > disconnect and LSD combination
- > efficiency and performance
- > active yaw control
- > optional torque vectoring



High performance coupling

EMCD®

- > electric or hydraulic actuation
- > low drag torque
- > Optimised connection methods



GKN Driveline – Trans Axle Solutions

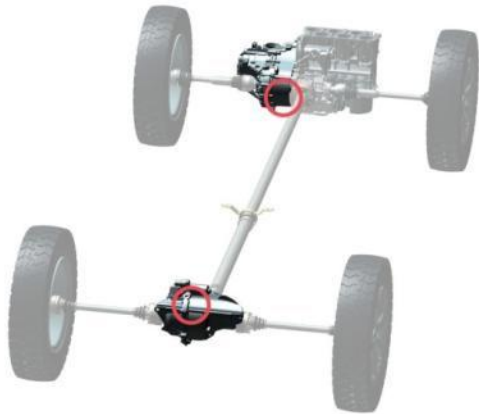


Trans Axle Solutions

unlimited thinking

a leader in conventional and controlled differentials for transmissions and axles

- > manufacturing in all regions of the world
- > full product range
- > established and experienced player



Global supply

Open Differential

- > smaller packaging
- > weight saving
- > globally available



Improved dynamic performance

Electronic Torque Manager (ETM®)

- > maximum traction
- > maximum stability



Adaptable sophisticated technology

Electronic Torque Vectoring

- > controlled fast cornering for premium cars



Off-road expert

Electronic Locking Differential

- > fast locking rear axle for extreme off-road conditions



GKN Driveline – eDrive Systems

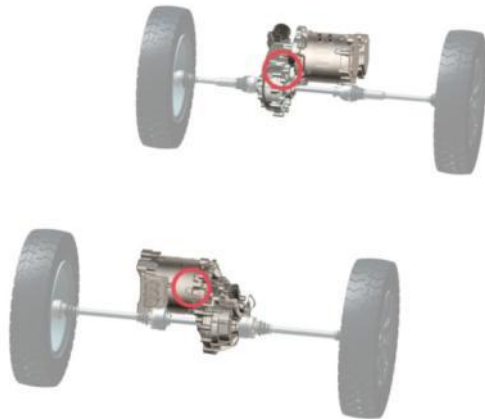


eDrive
Systems

Electrified thinking

a pioneer in advanced electric and hybrid drivelines

- > systems leadership capability
- > standard product range
- > 250,000 vehicles on the road
- > eTransmissions success in each major automotive region
- > broader range of motors



Hybrid with improved performance

eAxle System

- > 30% fuel saving
- > four driving modes



Economies of scale

eTransmission Family Approach

- > Compact
- > ultra quiet
- > choice of interfaces & gear ratio



Proven technology

Multi-mode eTransmission

- > total control of fuel economy
- > seamless switching between modes



Dynamic partnership

Integrated Motor & eTransmission

- > advanced electric motor technology
- > low weight
- > compact packaging





Driveline systems and solutions that deliver

COMPANY PRESENTATION

ZRE

2014



CVJ Systems



AWD Systems



Trans Axle Solutions



eDrive Systems

GKN Driveline Slovenija



ZRE History

1986

Founding of plant at ZRECE; Share Holders:
UNIOR 88,65%, UC-GKN 10%, AC – Lj. 0,5%, IMV-NM 0,85%

1987

Start of sample release for ZASTAVA, Fixed Joints & Tripods

1988

Start of series supplies to ZASTAVA

1991

Loss of key customer ZASTAVA due to Yugoslavian war

1993

Decrease of capital stock and pay off IMV-NM:
UNIOR 71,5%, GKN 18%, AC-Lj. 10,5%

1994

Start of Tubular Interconnecting Shaft production, AC-Lj. paid off

1996

GKN Driveline take over 74% of share, UNIOR 26%

1998

GKN take over 100% of share

1999

Acquisition of land and building from UNIOR
Sales structure change – GKN/Renault contract terminated,
internal sales increased : start with new customer FIAT

2001

Acquisition of additional land from UNIOR d.d.

2004

Expansion production area for FBJ and Tripod



ZRE History

2006

Investment in the new building and additional production capacities

2008

Finished expansion plan – step 5 (FBJ – 15.000 pcs/day;
Tripod – 16.000 pcs/day)

2010

Start the collaboration with the new customer for vehicle
BMW Mini Colorado R 60 – Lemferder

2011

25th anniversary of GKN ZRE;
Start the collaboration with new customer Fiat Automobili Serbia

2013

Investment in additional production capacities for HSH
Start the collaboration with new customer Dacia Duster Romania

2014

Start the collaboration with new customer Revoz Novo mesto



Our Products

> Halfshafts

- FIAT, BMW - Mini Countryman, FAS Serbia, Dacia Duster
- From June 2014 onwards Revoz/Renault



2008

2011

2012

2014

1200 pcs/day

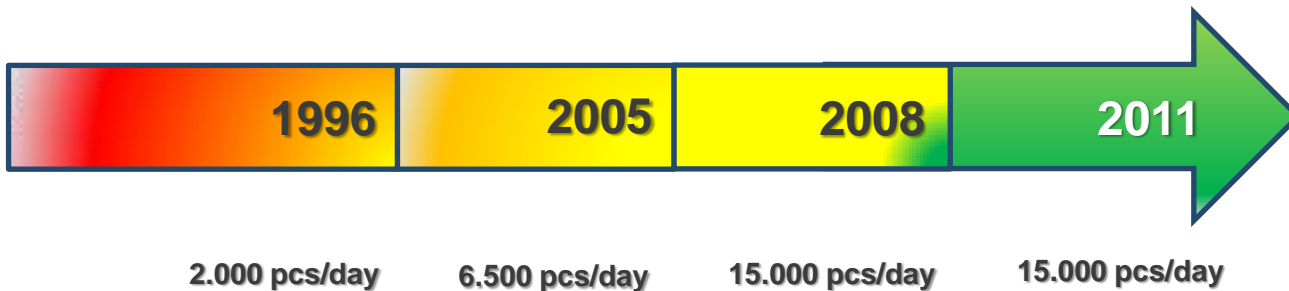
3100 pcs/day

4620 pcs/day

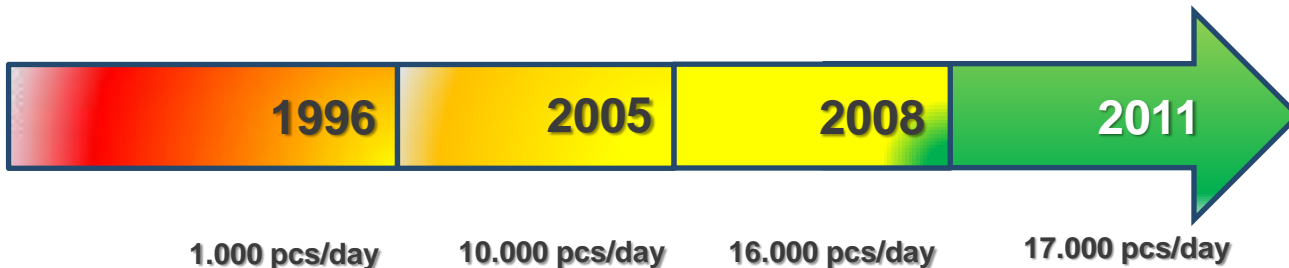
5875 pcs/day

Our Products

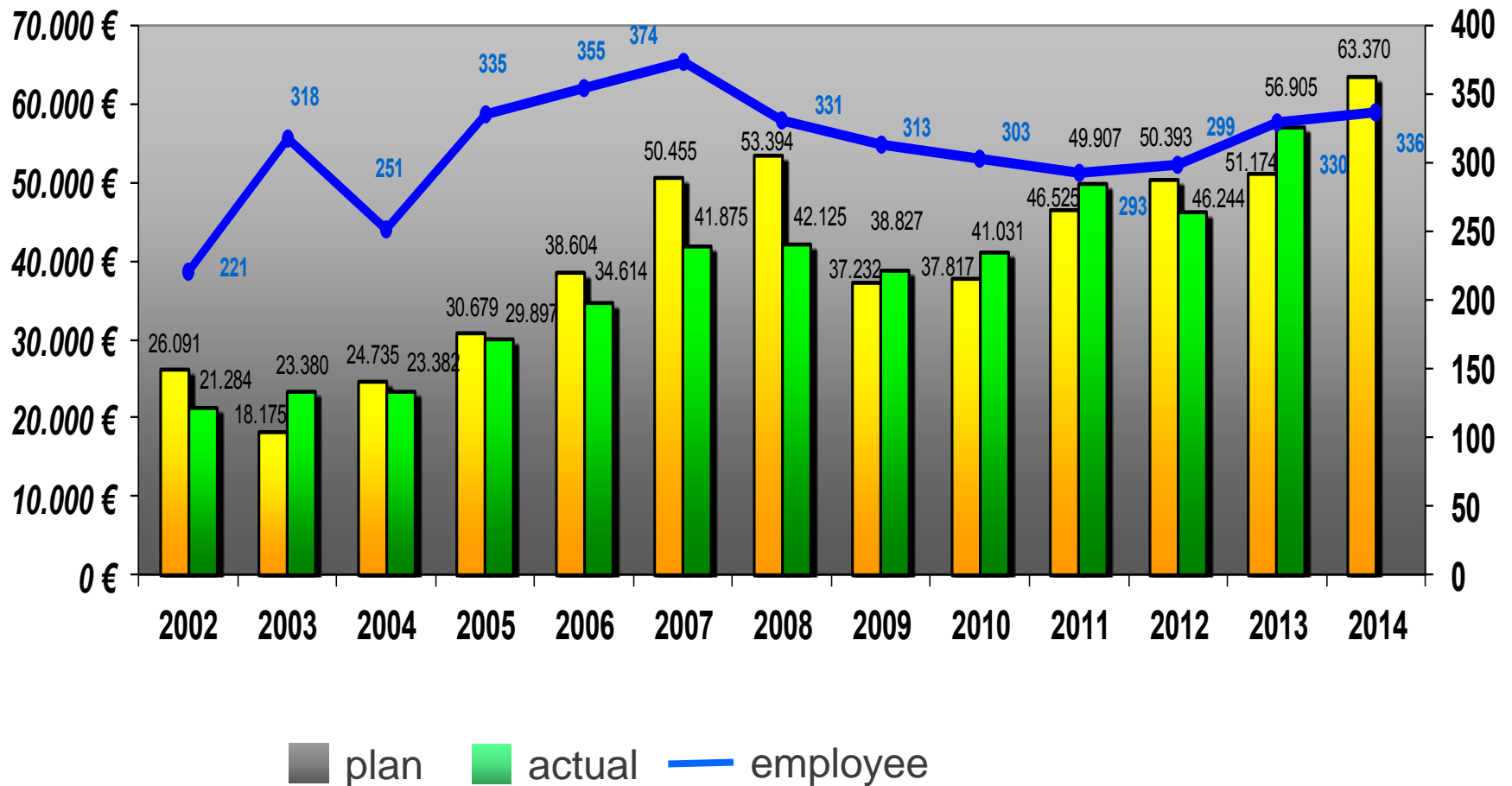
> CVJ - AC/UF Constant Velocity Joints different sizes



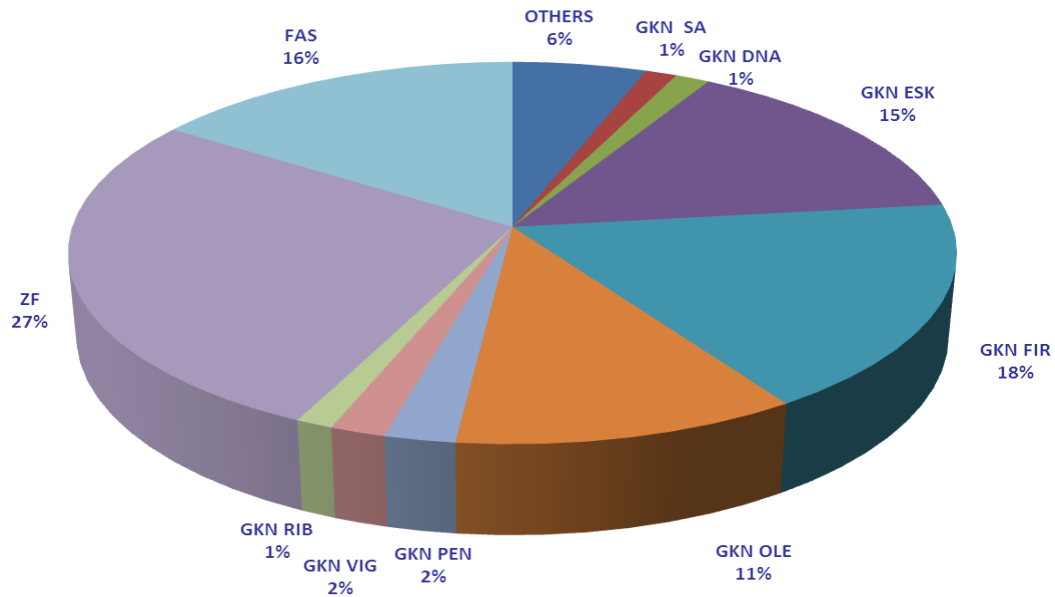
> Tripods - GI different sizes



Sales in k€ and employees per years



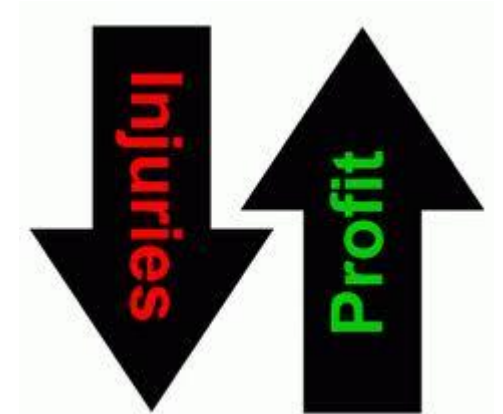
Sales per customers 2013



PSA PEUGEOT CITROËN



Injury Cost Pyramid



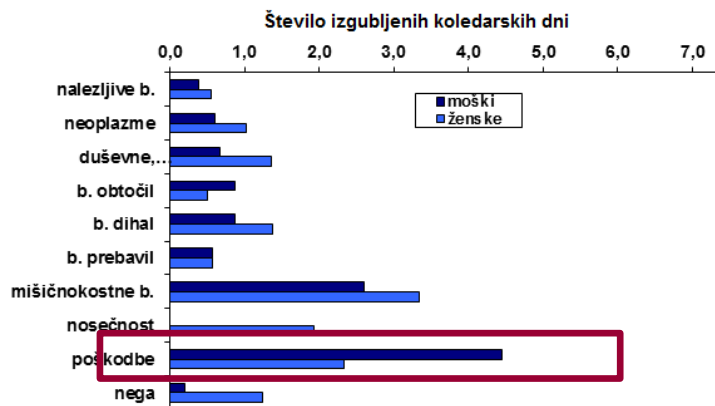
Lost time accident statistic

Nb. of accident in Slovenija

| | Nb.of reported accidents(lost time) | Fatal accidents |
|------|-------------------------------------|-----------------|
| 2009 | 21.402 | 31 |
| 2010 | 20.803 | 28 |



Nb. of lost days (avarage for SLO)



Source: Inštitut za varovanje zdravja Republike Slovenije

Absenteeism - statistic

- > 10,0 to 11,0 mio. lost days in total (10 years average statistic)
- > Approx. 35% due to accidents
- > 40.000 people daily out of job
- > More than half costs paid by employer
- > Average nb. of loosed days 9,0 (short time paid by employer) or 18,9 (long time absenteeism, paid by „Insurance Company“)
- > Total yearly „absenteeism,, costs are about 800 mio.€



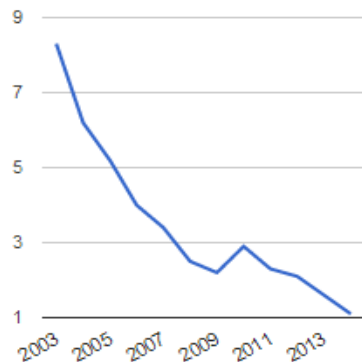
Source: Inštitut za varovanje zdravja Republike Slovenije

Lost time accident statistic GKN

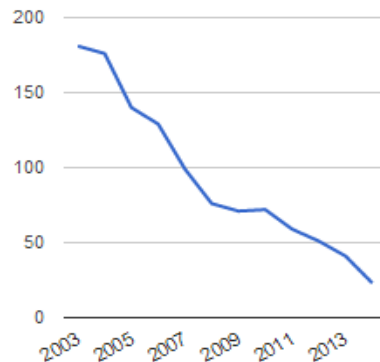
Reports Scorecard

Division: Country:

Group AFR - Accident Frequency Rate (Number of lost time Accidents per 1000 employees)



Group ASR - Accident Severity Rate (Number of days / shifts lost due to Accidents per 1000 employees)



Month: Year:

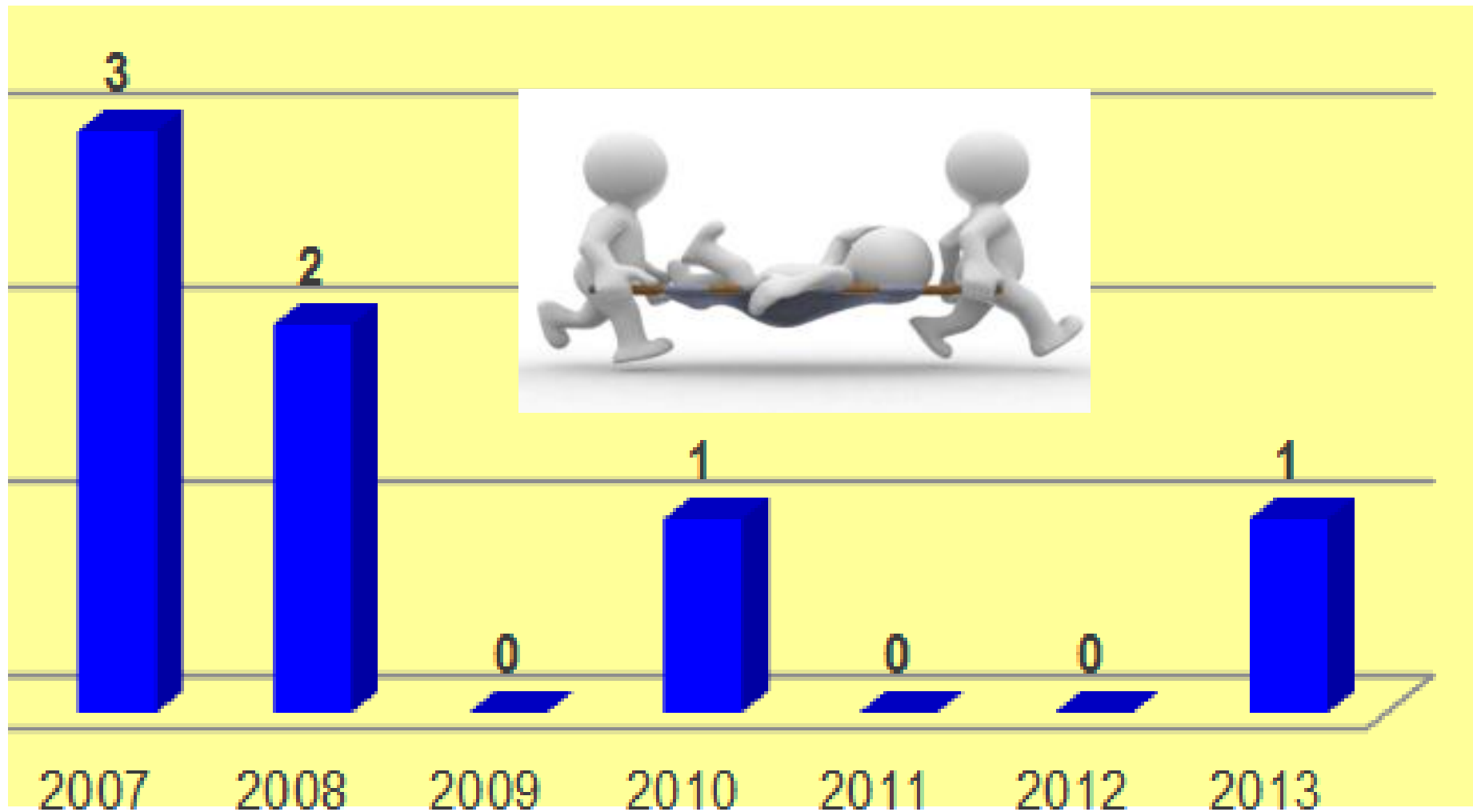
| March 2014 | | | | | | |
|------------|----|----|----|----|----|----|
| Mo | Tu | We | Th | Fr | Sa | Su |
| 24 | 25 | 26 | 27 | 28 | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 1 | 2 | 3 | 4 | 5 | 6 |

Dates which have incidents are highlighted:

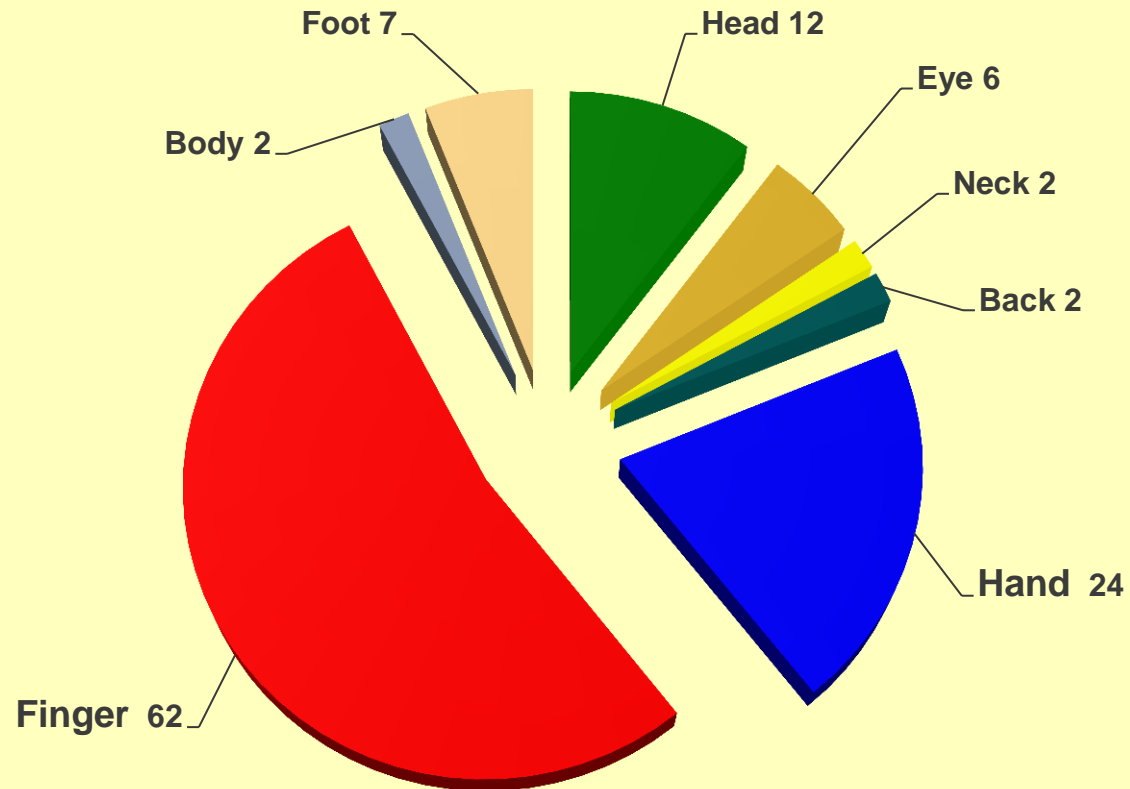
Lost time Serious

Incident types: Injury - in the course of work Near Miss Property damage Environmental incident

Accident statistic GKN ZRE

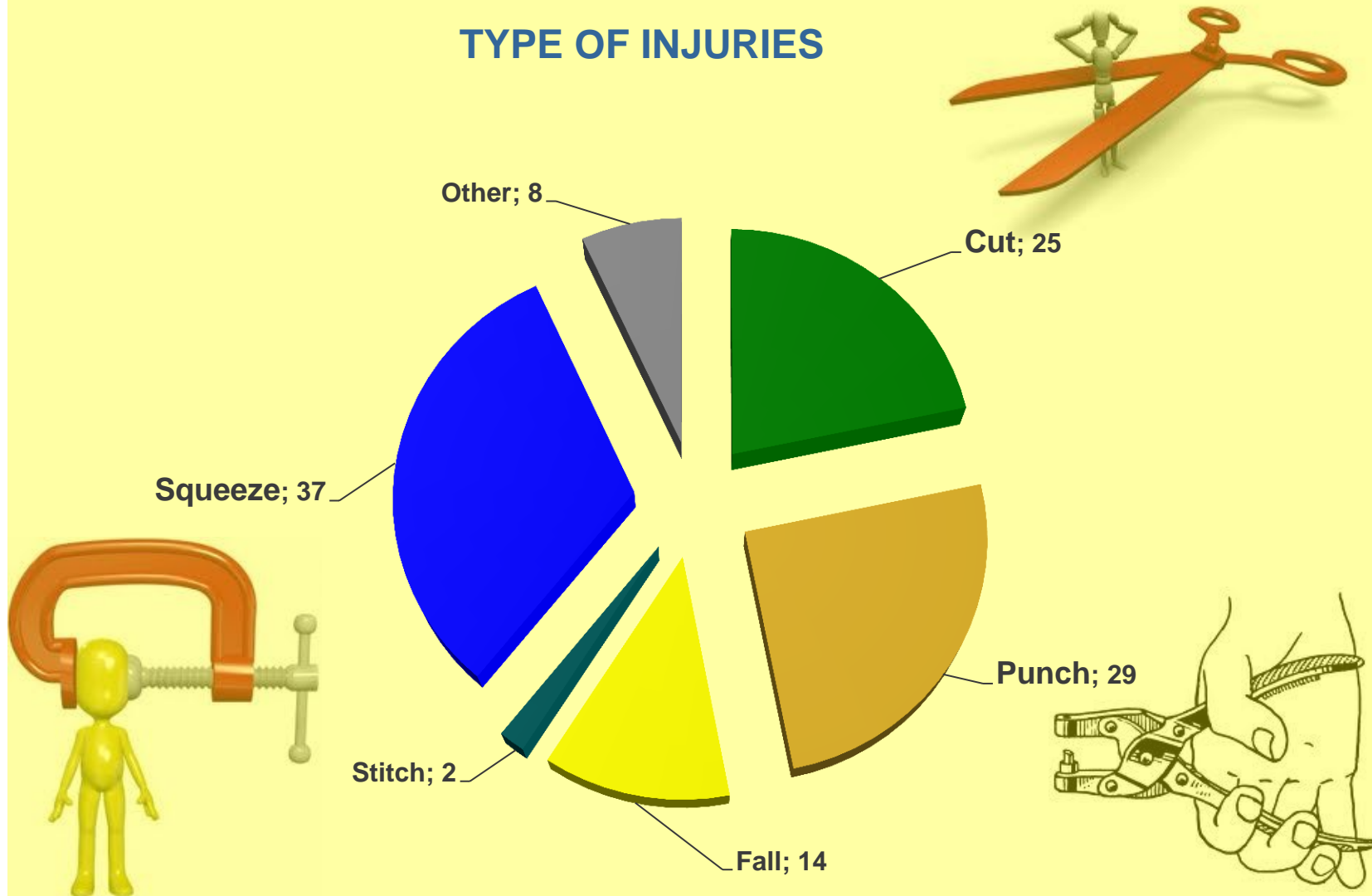


LOCATION OF THE INJURIES



Accident statistic GKN ZRE

TYPE OF INJURIES



Why this is important to me

Accident means

- Loss of working time, productivity
- Interruption of working process
- Responsibility
- Overtime hours
- Pain, stress,...
- Limits at job and also in private time
- Lot of costs – money



Statement of Policy

The health and safety of our employees and of all others who may be affected by our business activities is of **the utmost priority**.

GKN is **committed** to providing a **safe working environment** that supports accident prevention and **minimizes exposure to health risks**.

Its aim is to eliminate work related illnesses and injuries. We must comply with the requirements of the legislation in each jurisdiction in which we operate and, by a **systematic approach** to the assessment and management of accidental risk, must actively pursue the goal of **“zero accidents”**



Think Safe Campaign



Think Safe Campaign

thinkSAFE! ebrochures



Q1! think cranes and heavy lifting equipment!



think combustible dust!



think danger within confined spaces!



think fall of material!



Q1! think cranes and heavy lifting equipment! (*handout*)



think combustible dust! (*handout*)



think danger within confined spaces! (*handout*)



think fall of material! (*handout*)

thinkSAFE!

- ▶ Danger Unloading
- ▶ Crane NEG
- ▶ Crane POS



- Focused activities
- All employees participate
- E- training

Do More

doMORE!

An opportunity for you to continuously improve your workplace by eliminating unsafe conditions and hazards



Division: Topic: Keyword(s):

| Year | Month | Topic | Division | Location | Before Image | After Image | Contact | |
|------|-------|-----------------------|-----------|---|--------------|-------------|----------------------------------|-------------------|
| 2013 | July | thinkSAFE! Hand Tools | Driveline | GKN Driveline India Limited Faridabad (FAR) | | | prashant tonk | i |
| 2013 | July | thinkSAFE! Hand Tools | Driveline | GKN Driveline India Limited Faridabad (FAR) | | | prashant tonk | i |
| 2013 | July | thinkSAFE! Hand Tools | Driveline | GKN Driveline Manufacturing Ltd (GTM) | | | | i |
| 2013 | July | thinkSAFE! Hand Tools | Driveline | GKN Driveline Slovenija (ZRE) | | | franc.skoberne@gkn-driveline.com | i |
| 2013 | June | thinkSAFE! Hand Tools | Driveline | GKN Driveline Mosel (MOS) | | | Sascha Lorenz | i |
| 2013 | June | thinkSAFE! Hand Tools | Driveline | GKN Driveline Mosel (MOS) | | | Sascha Lorenz | i |

Think Safe Campaign

Protection of face in heat treatment:



⚠️ Difficult to manage the furnace with using the old protection (visibility).



Replacement face protection with enhanced visibility.

• Boljša vidljivost viličarja !



• PREJ : Brez luči



POTEM : Rotacijska luč

Replacement of barrels with grease on the half shaft line



⚠️ Manually changing of the grease barrels on half shaft assembly line

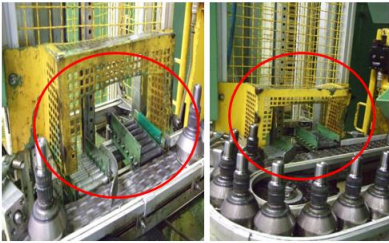


Change of barrels with grease through the rollers carts

GKN Driveline 11

Think Safe Campaign

Guarding of CVJ grinding machines

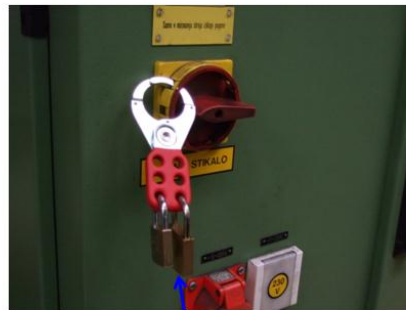


⚠️ Enough space to enter arm and be injured by moving parts



Guard added

Action related ThinkSafe - LOTO:



Protection of the power switch to the more maintenance



Installation of warning signs when the main switch is turned ON



GKN Driveline

Near misses management

Near misses Management

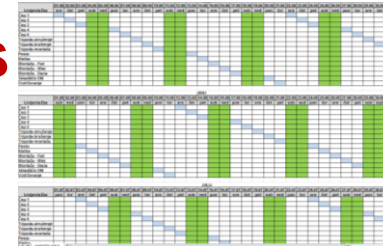


Report Near Misses



Near missis management

Daily H&S and Environment Audits



The image shows three stacked audit sheets. Each sheet has a grid with columns for different audit categories and rows for individual auditors. Green bars indicate the status of each audit item, and a blue line graph tracks the overall performance over time.

- Every day at 9.00 o'clock
- H&S and Environment Engineer + Line Leader; based on plan
- Preparation of Audit Report till 12 o'clock – submit PU Leader for estimation of the Risk

Nevaren dogodek

Linija: Čep 5 Auditor: F. Škoberne Datum: 22.07.2013

Ugotovitve

- Montaža zgloba – nezaščiten transportni trak (možnost potega delovne obleke)



The photograph shows a conveyor belt system in a factory. A red arrow points from the text 'nezaščiten transportni trak' to a specific part of the conveyor where a worker's clothing is near the moving belt.

- Information on Info Meeting at 8.00 o'clock – next day – feedback about actions

Near misses management

| Resnost | Opis | Izberi polje |
|---------|---|--------------|
| Majhno | Poškodbe in bolezni, ki ne povzročajo dolgoročnih težav in odsotnosti z dela na delu. To so začasno poslabšanje zdravja. | x |
| Srednje | Poškodbe in bolezni, ki povzročijo majhne, a dolgotrajne ali ponavljajočese bolečine od časa do časa in so povezani z obdobji odsotnosti z dela. Te vključujejo telesne poškodbe, drugo stopnjo opeklin na manjšem delu telesa, kožne alergije, enostavni zlomi, preobremenitev mišično-skeletnega sistema, itd | |
| Visoko | Poškodbe in bolezni, ki povzročajo hude in trajne bolečine in / smrtni primeri. | |

| Verjetnost | Opis | Izberi polje |
|---------------|---|--------------|
| Malo verjetno | Posledice tveganj, ki se ne bi smele pripetiti med delovno dobo delavca | |
| Verjetno | Nevarnosti, ki se lahko pojavijo ne večkrat nekajkrat v času delovne dobe zaposlenega | |
| Zagotovo | Nevarnosti, ki se lahko pojavijo večkrat med delovno dobo delavca | x |

| Verjetnost | Resnost | | |
|------------------|--------------|--------------|--------------|
| | 1- Majhna | 2- Srednja | 3- Visoka |
| 1- Malo verjetno | Lokalno | Lokalno | JŠ odločitev |
| 2- Verjetno | Lokalno | JŠ odločitev | DCS |
| 3- Zagotovo | JŠ odločitev | DCS | DCS |

- Visoko tveganje – takojšnja aktivnost z evidenco
- Srednje tveganje, informiranje vseh zaposlenih, pregled podobnih procesov
- Nizko tveganje, informiranje zaposlenih



GKN Driveline

A3 approach to H&S

| | | | | | | | | |
|--|--|---|---------------------|---|------------|--|----------|--|
| | TITLE ZRECE SAFETY CULTURE IMPROVEMENT HS | MILESTONES | PPS NO. HSE 2014 | OPEN DATE 13.1.2014 | CLOSE DATE | SIGN OFF | SIGN OFF | |
| STEP 1 PROBLEM CLARIFICATION | | | | | | | | |
| 1.0 Background 330 employees on 3 production department, 3 shifts. Daily HSE audits, external audits... Data base of accidents, near misses Measures: - accidents - near misses | | 1.1 Gap Analysis | | 1.2 Problem Statement Ultimate goal: zero accidents and incident 0 SIR, 0 AFR, 0 ASR. The safest GKN in the world Ideal Situation: remain zero accident and reduce number of injuries - 0 SIR, 0 AFR, 0 ASR Current Situation: 2013 - 0 SIR, 3 AFR, 57 ASR Problem Statement: | | | | |
| STEP 2 CONTAINMENT | | | | | | | | |
| STEP 3 PROBLEM ANALYSIS & BREAKDOWN | | | | | | | | |
| <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> 3.1 Accidents </div> <div style="width: 33%;"> 3.1.1 Accidents in departments </div> <div style="width: 33%;"> 3.1.2 Accidents with the division into body parts </div> <div style="width: 33%;"> 3.2 The reason of injuries from 2011 to 2013 </div> <div style="width: 33%;"> 3.3 Near miss risk evaluation </div> <div style="width: 33%;"> 3.4 Near misses reported by </div> <div style="width: 33%;"> 3.1.1 Near misses with the division into </div> <div style="width: 33%;"> 3.1.2 Near misses in departments </div> <div style="width: 33%;"> 3.1.3 Near misses by shift </div> <div style="width: 33%;"> 3.1.4 Male/Female </div> <div style="width: 33%;"> 3.4.1 Information flow </div> <div style="width: 33%;"> 3.4.2 Summary of Problems to Pursue <ul style="list-style-type: none"> 1. A lot of incidents or injuries related to the hands which happen in 3 shifts 2. Small involvement of employees in searching identification/reporting of near Misses 3. Insufficient personal communication about near miss events among the organization </div> </div> | | | | | | | | |
| STEP 4 TARGET SETTING | | | | | | | | |
| Target Statement Visualised 1. 50% of all near misses will be reported by operators till the end of 2014 2. Informations to all employees about near miss or accident within 24h since an event occurred 3. Reduce injuries related to hand of 30% | | 1. Increasing near miss reporting by operators | | 2. Free flow information | | 3. Reduction of injuries related to hands | | |
| STEP 5 ROOT CAUSE ANALYSIS | | | | | | | | |
| PROBLEM(S) Direct Cause(s) Why? Therefore Why? Therefore Why? Therefore Why? Therefore Why? Therefore | | | | | | | | |
| STEP 6 DEVELOP & PLAN COUNTERMEASURES | | | | | | | | |
| STEP 7 CHECK RESULTS (MONITOR) - OCTOBER STATUS | | | | | | | | |
| STEP 8 STANDARDISE SOLUTION | | | | | | | | |

Signed Up Campaign - visibility

Sign up to thinkSAFE!
I've Signed up to thinkSAFE! and now it's your opportunity to demonstrate your commitment to our goal of a zero injury culture, so that we can all go home safe at the end of the day.

thinkSAFE!

How do I sign up?

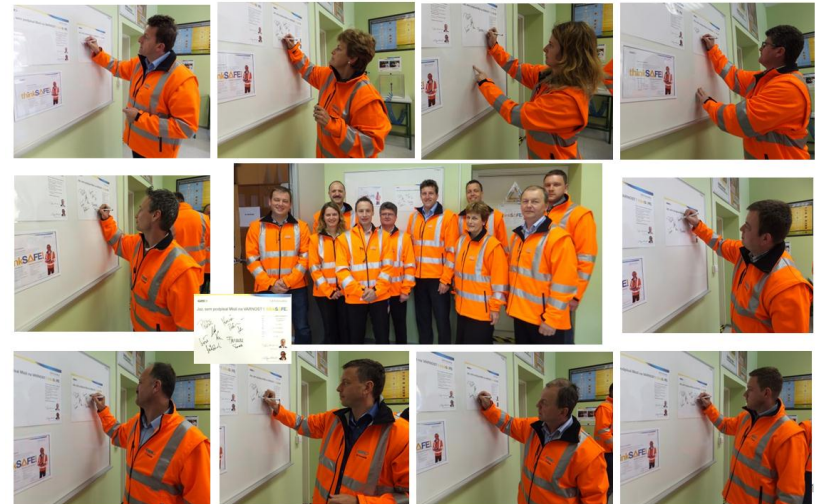
- Attend training in Safety Corner
- Help complete a safety improvement (Do More)
- Help your co-worker work safely
- Congratulations! You are signed up to thinkSAFE!

What things will be happening?

- We'll share your improvement throughout GKN
- Read more in our new thinkSAFE newsletter
- Signature board coming soon to your safety corner
- Participate in the thinkSAFE excellence award

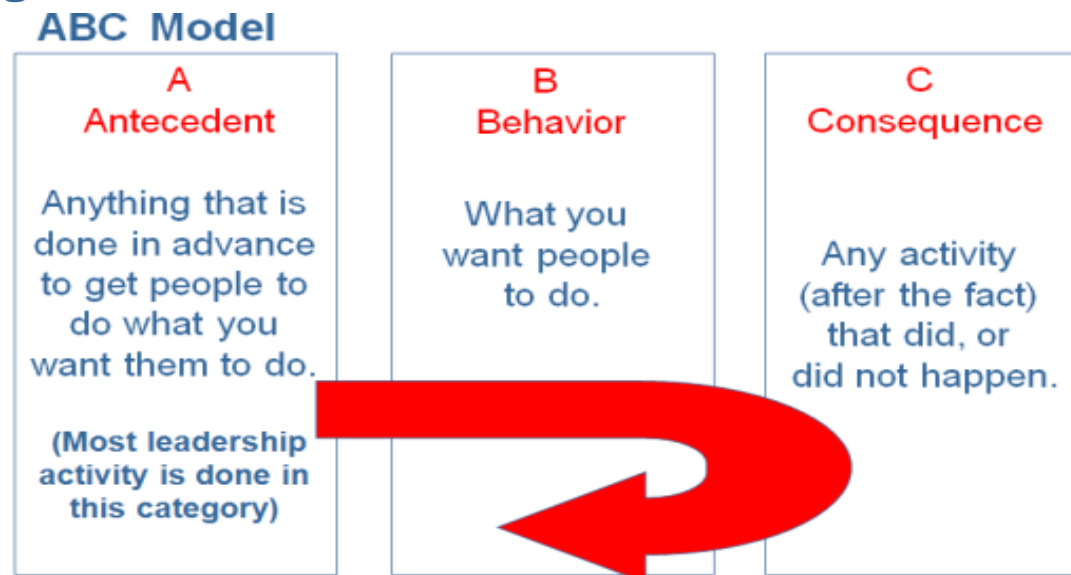
Philip Hill 15
Health Protection Manager - GKN Driveline

2013 thinkSAFE "I've Signed UP"



Think SAFE to Start SAFE

- > Practical evaluation of H& Safety trainings performed by supervisors
- > All leaders involved in 1 day H&S Work shop – **Conscious Safety**
- > Further development of H& Safety **awareness** and „Safe Leadership „with following ABC Model“



Pattern should always be A, B, C

Don't walk by

“Encouraging employees to identify and resolve safety & environmental concerns”

don't  WALK BY!

Always Remember!

- 1 If we see colleagues working unsafely STOP! the activity and resolve
- 2 Encourage team members to identify any unsafe and poor environmental situations
- 3 Report incidents, accidents and near misses
- 4 Encourage everyone to work safely and improve using RADAR
- 5 Contain, correct and improve unsafe conditions



fall of material



fork lift truck



gases and chemicals



hands



hand tools



LOTO
(Lock Out Tag Out)



machinery
in motion



manual
handling



PPE
(Personal Protective
Equipment)

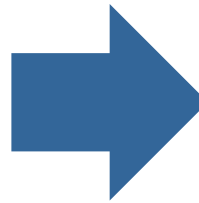


RADAR
(Risk Awareness Detection
Action Review)



slips, trips
and falls

Summary



thinkSAFE!
thinkGREEN!

