



SARbian – The free and open SAR Operating System

Robert Eckardt,

Felix Cremer,

Felix Glaser,

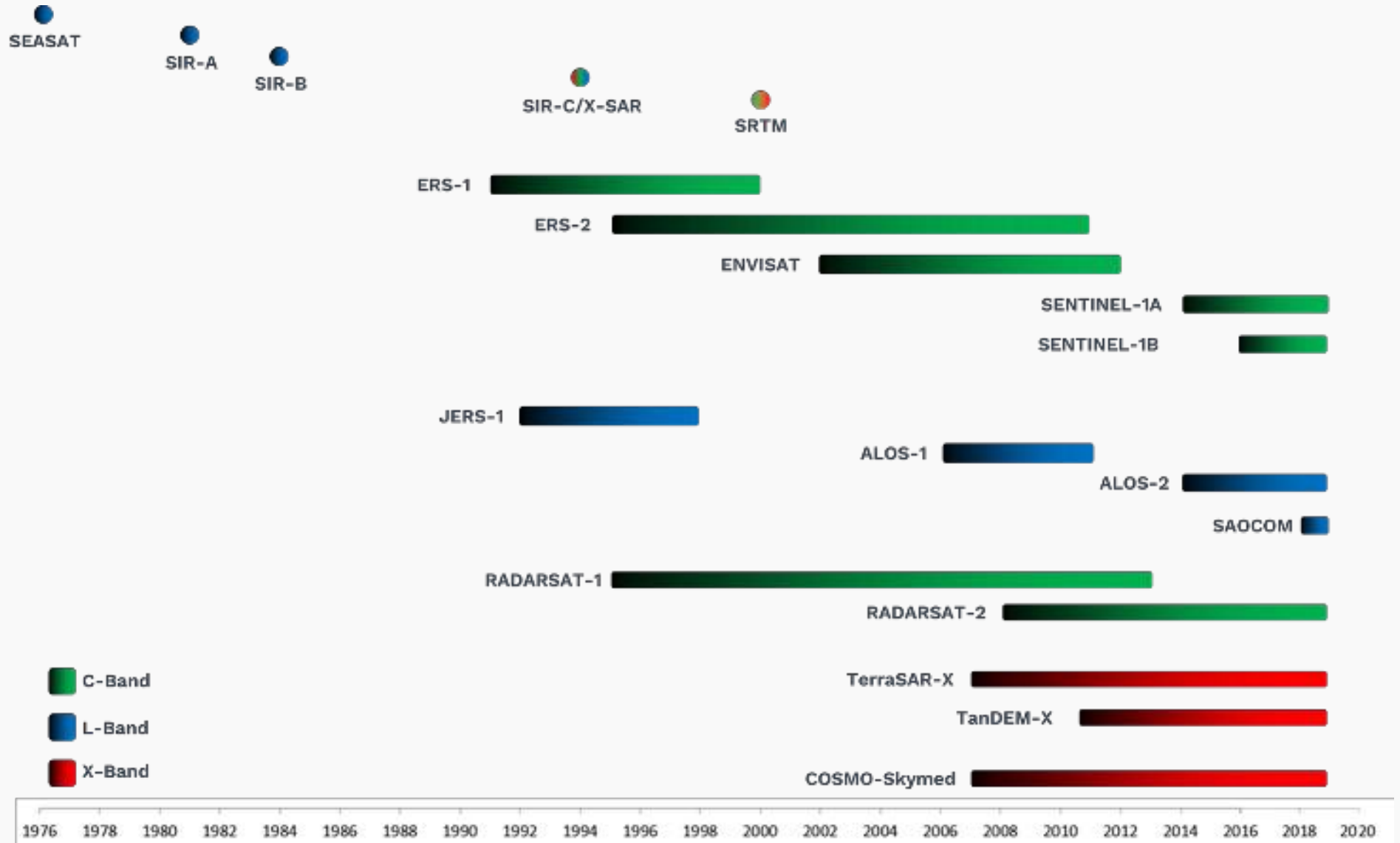
Christiane Schullius

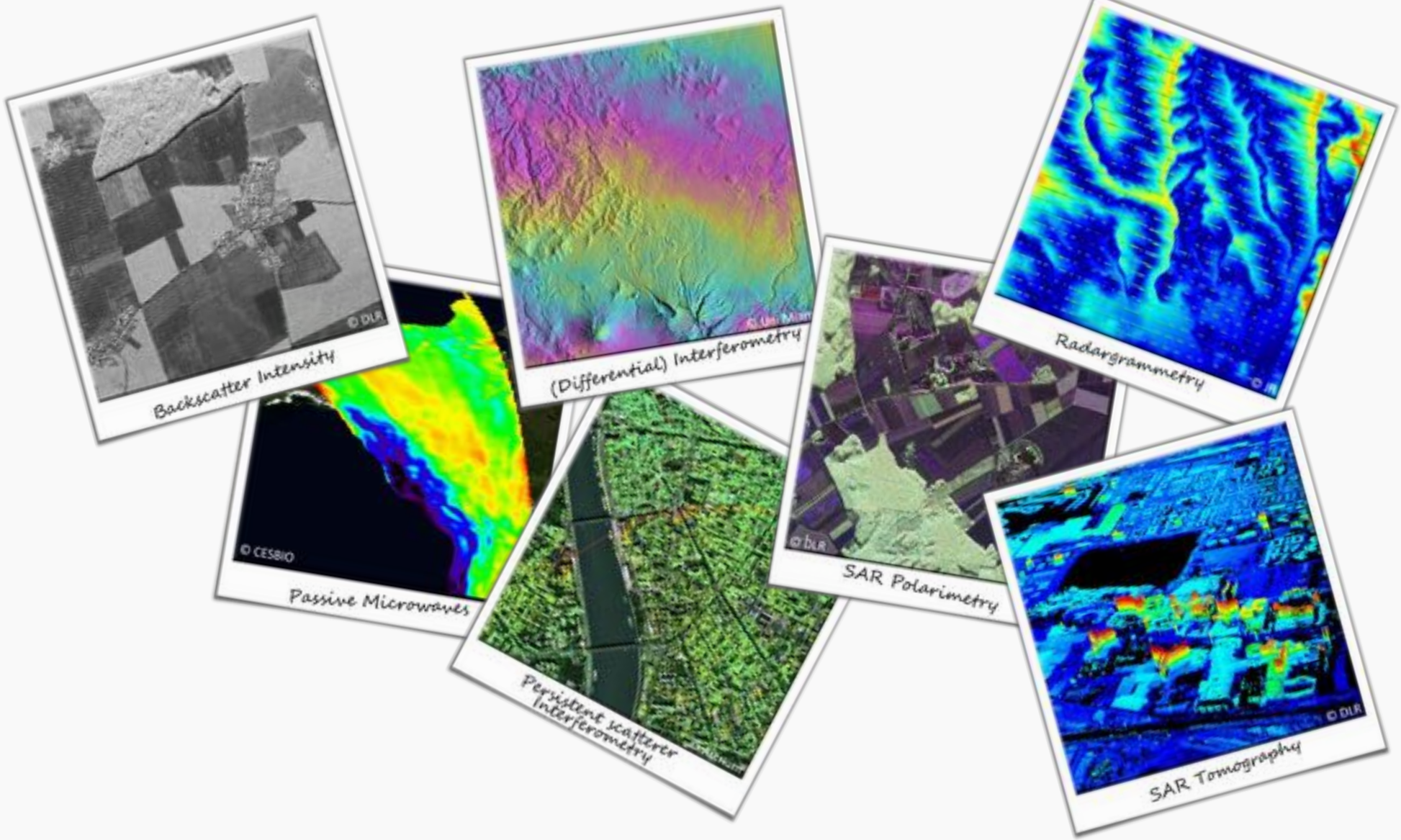


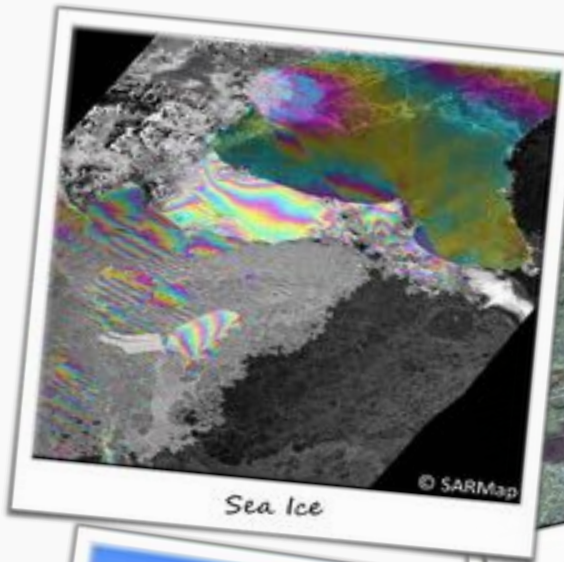
EIOIS



Context





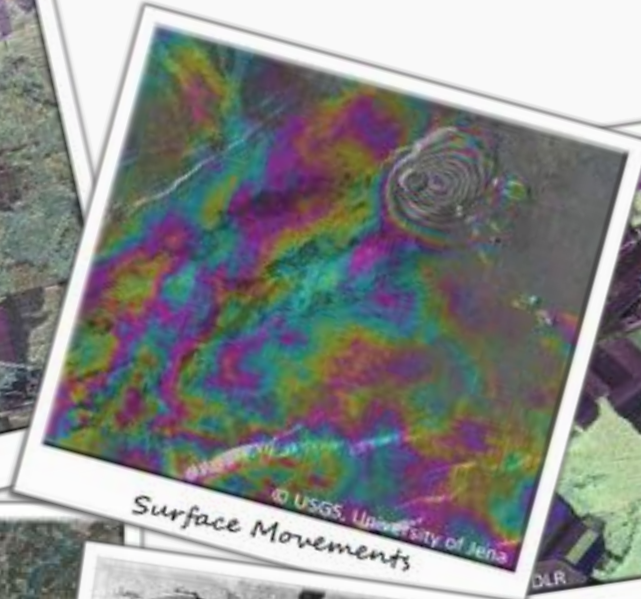


Sea Ice

© SARMap

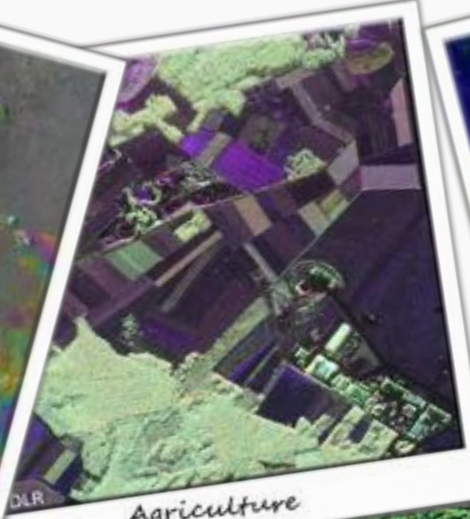


Forestry



Surface Movements

© USGS, University of Jena



Agriculture

DLR



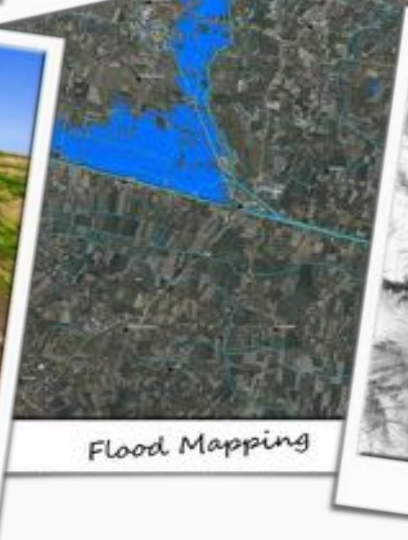
Ocean Waves

© ESA

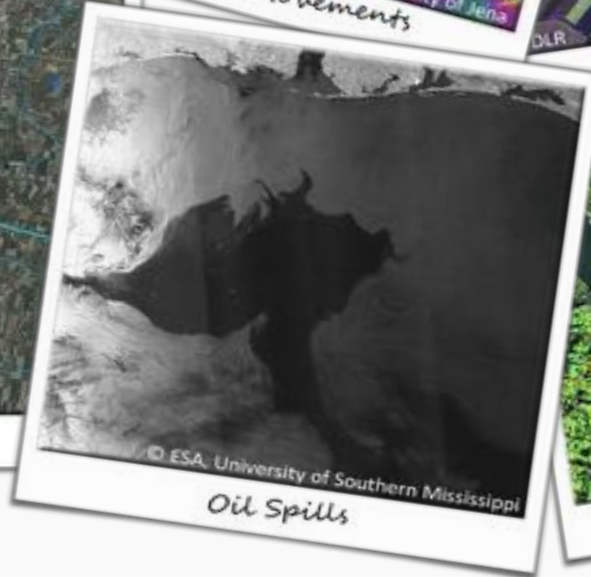


Digital Elevation Models

© NASA, JPL

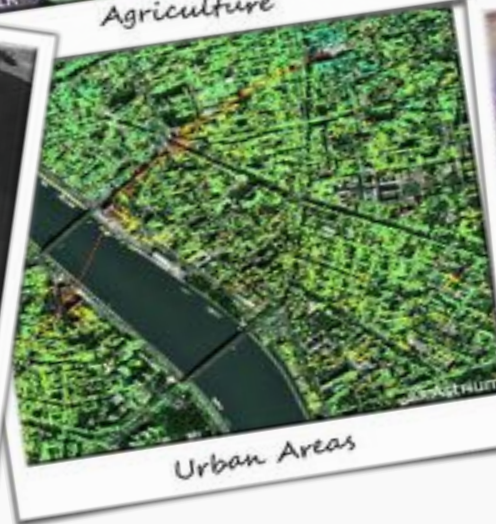


Flood Mapping



Oil Spills

© ESA, University of Southern Mississippi



Urban Areas

© Astrilint



Geology

© NASA



EO KNOWLEDGE



DATA



EO
KNOWLEDGE



DATA



**EO
KNOWLEDGE**



COMMUNITY



DATA



EO
KNOWLEDGE



TOOLS



COMMUNITY



IDEA: FREE & OPEN OS FOR RADAR SOFTWARE



IDEA: FREE & OPEN OS FOR RADAR SOFTWARE

Rolemodel:





IDEA: FREE & OPEN OS FOR RADAR SOFTWARE



eo-college.org/sarbian

Rolemodel:





Software



- ESA SNAP
- ASF MapReady
- pyroSAR

GENERAL

- DORIS
- SNAPHU
- PyRAT

InSAR

- PolSARPro 5.0

PolSAR



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PolSAR



- QGIS
- GRASS GIS
- GDAL

GIS

- R (r-base)
- RStudio
- abind
- jpeg
- mapproj
- raster
- rgdal
- rgeos
- shiny
- sp

R



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R



- Python 2 and 3
- matplotlib
- numpy
- PyRAT
- pyroSAR
- scipy
- spatialist

P YTHON

- Octave
- Computational Geometry
- Image Processing
- Linear algebra
- Mapping Functions
- netcdf
- The NaN-toolbox

OCTAVE



Implementation

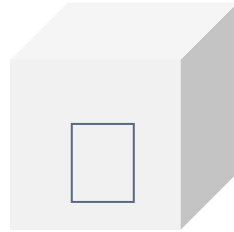
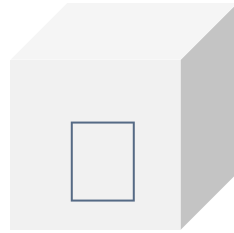
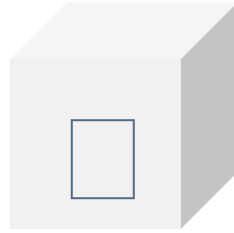


debian

LINUX OS



debian



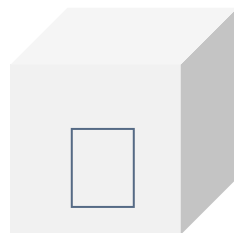
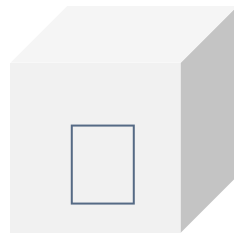
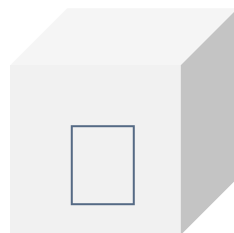
LINUX OS

SAR SOFTWARE



debian

LINUX OS



SAR SOFTWARE

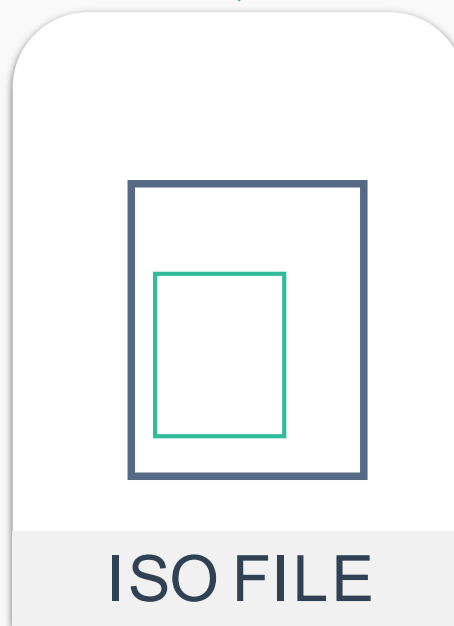
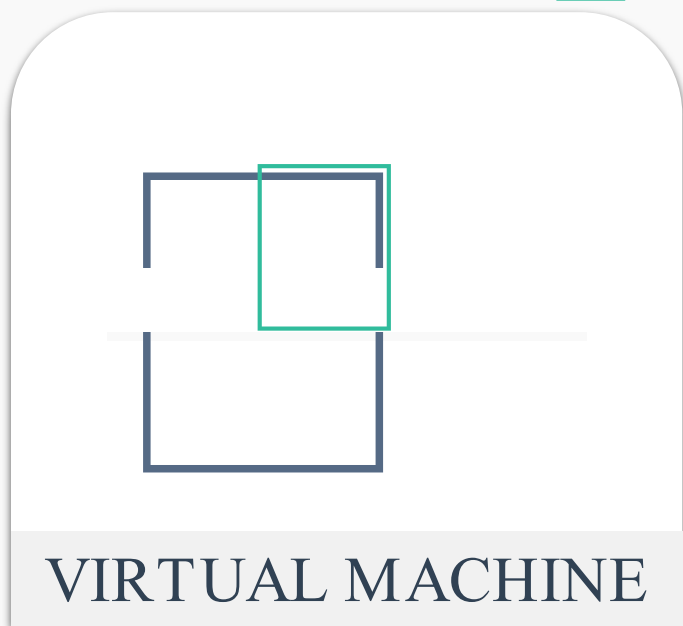




Distribution









Road Map



Improve the building process for new contributors

- Script which prepares an OS to build SARbian
- better cleanup scripts

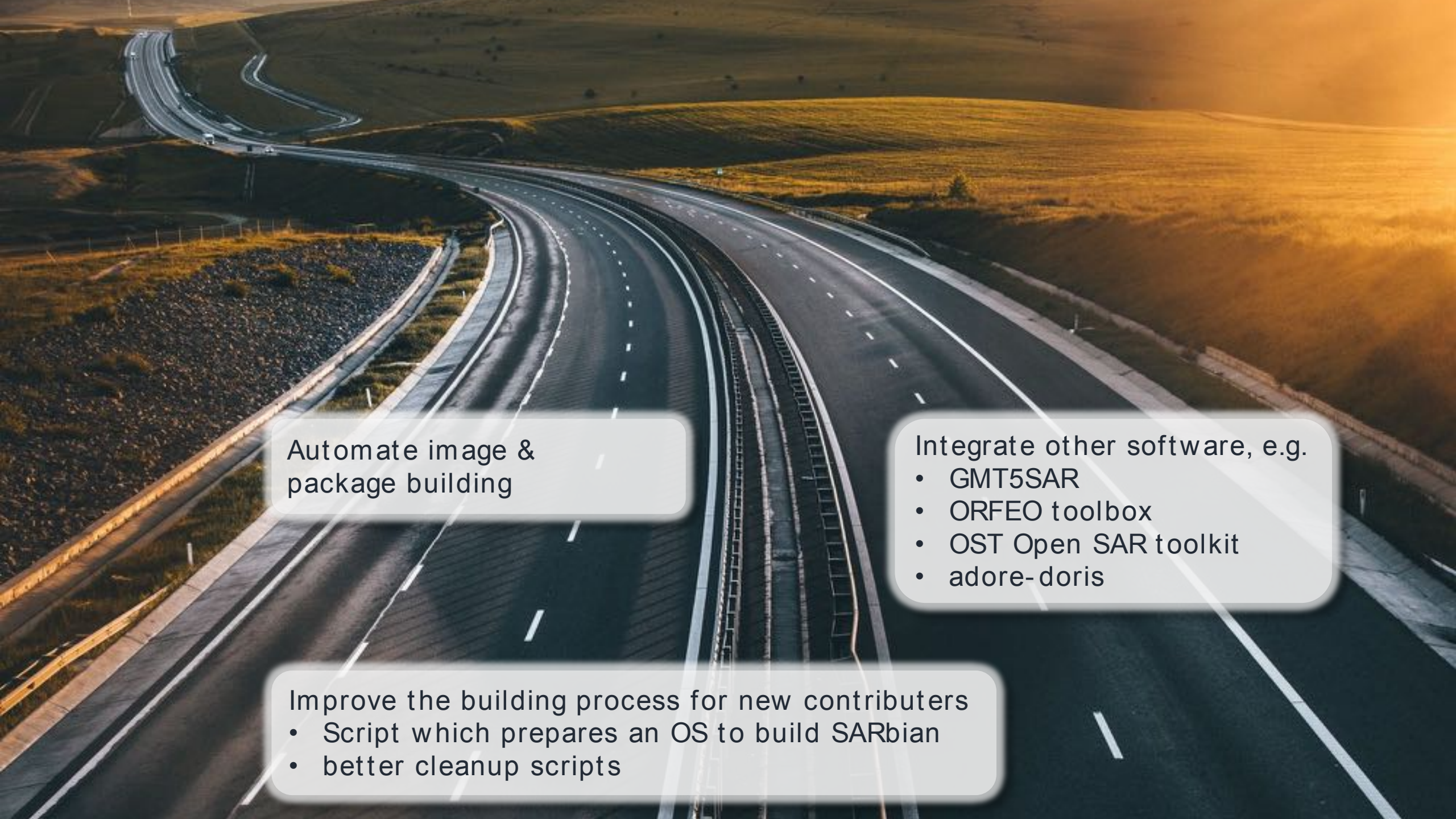


Integrate other software, e.g.

- GMT5SAR
- ORFEO toolbox
- OST Open SAR toolkit
- adore-doris

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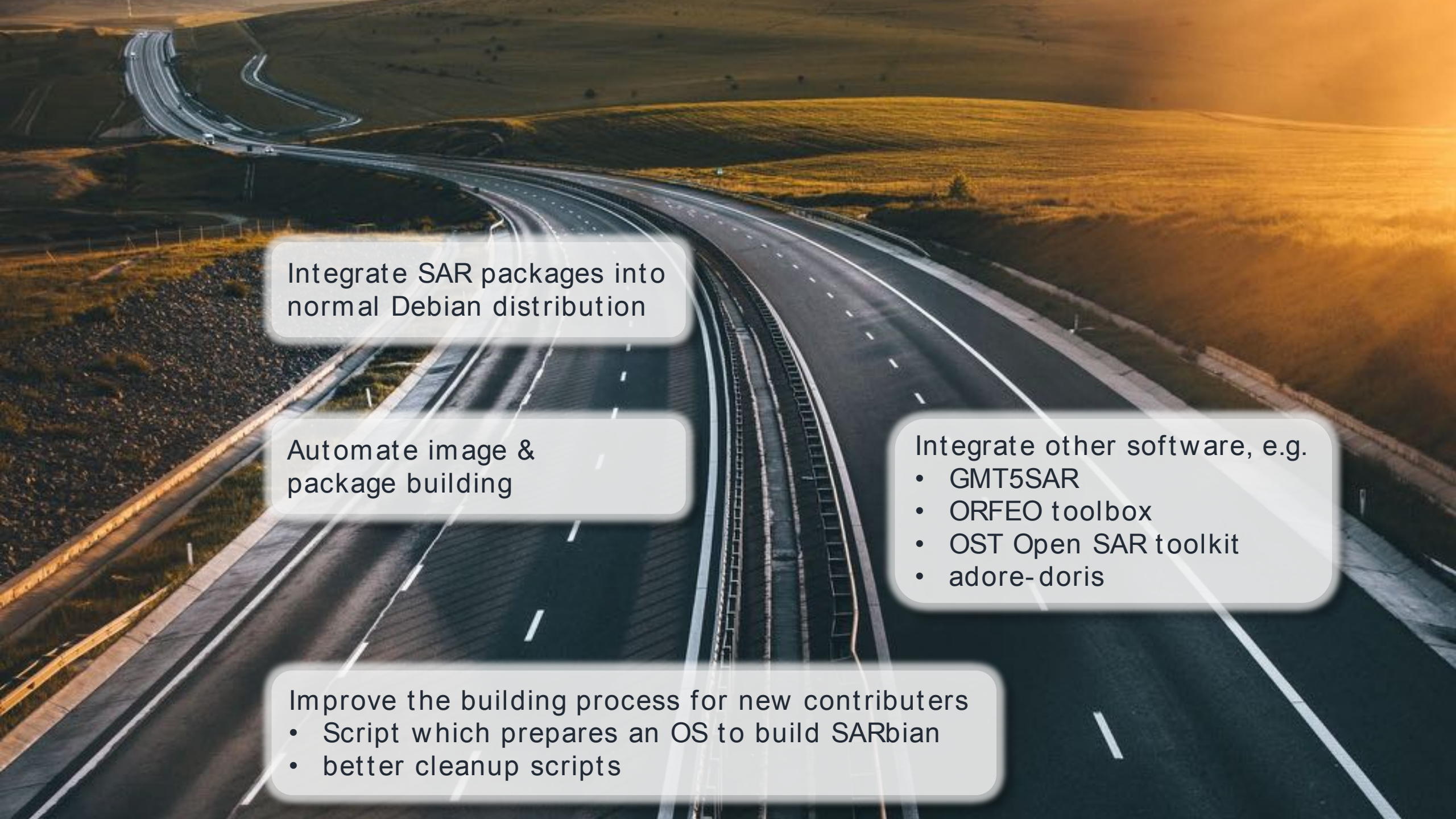
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Integrate SAR packages into normal Debian distribution

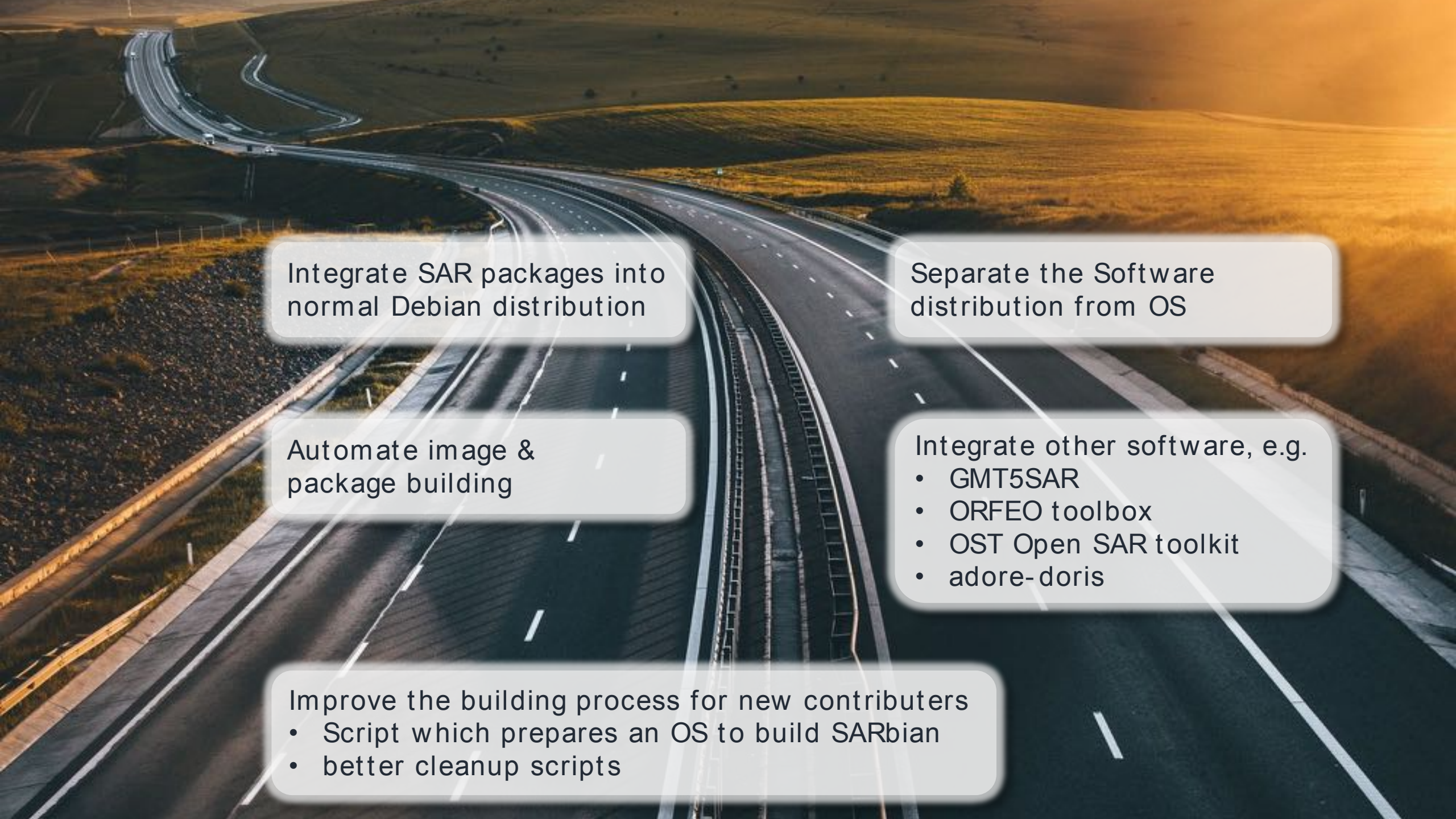
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Integrate SAR packages into normal Debian distribution

Separate the Software distribution from OS

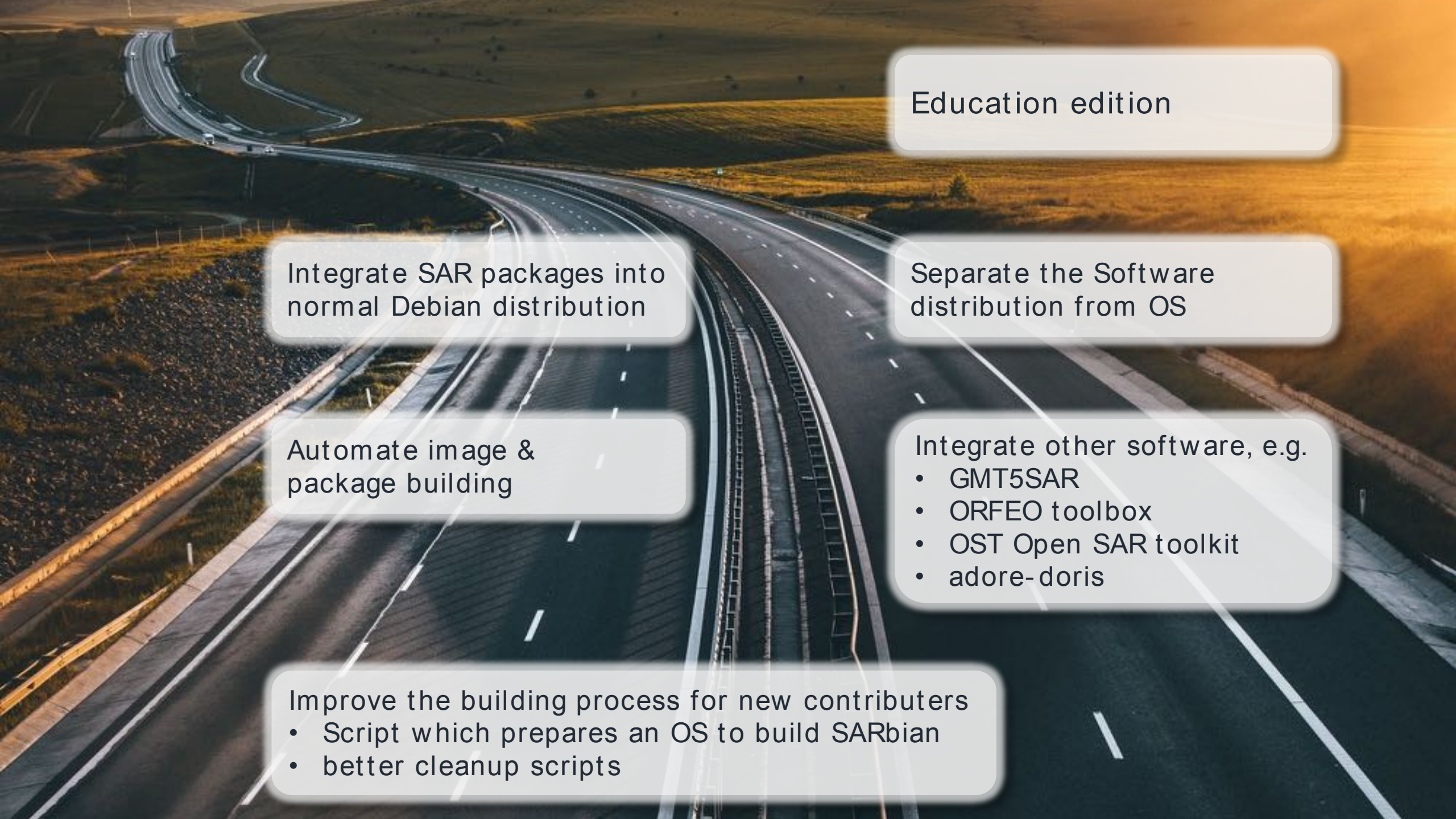
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Education edition

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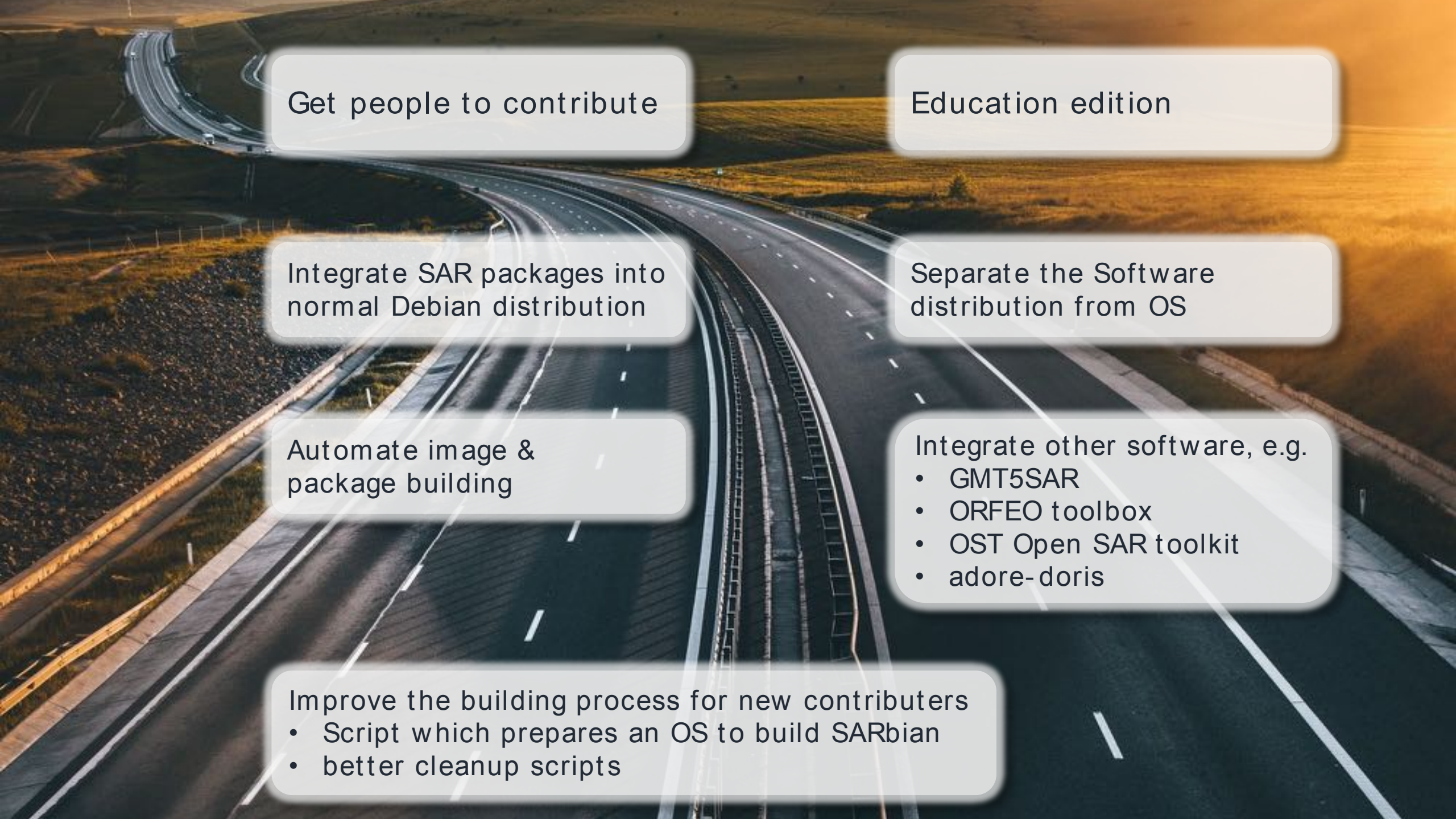
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Get people to contribute

Education edition

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How to contribute?



github.com/EO-College/sarbian



sarbian@eo-college.org