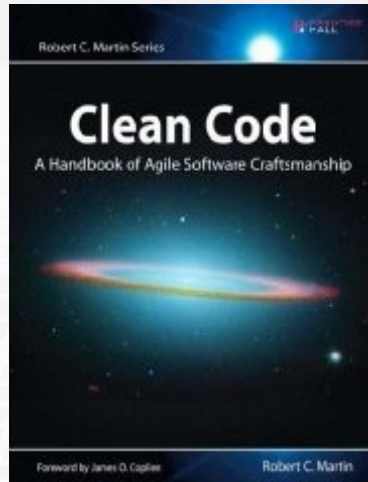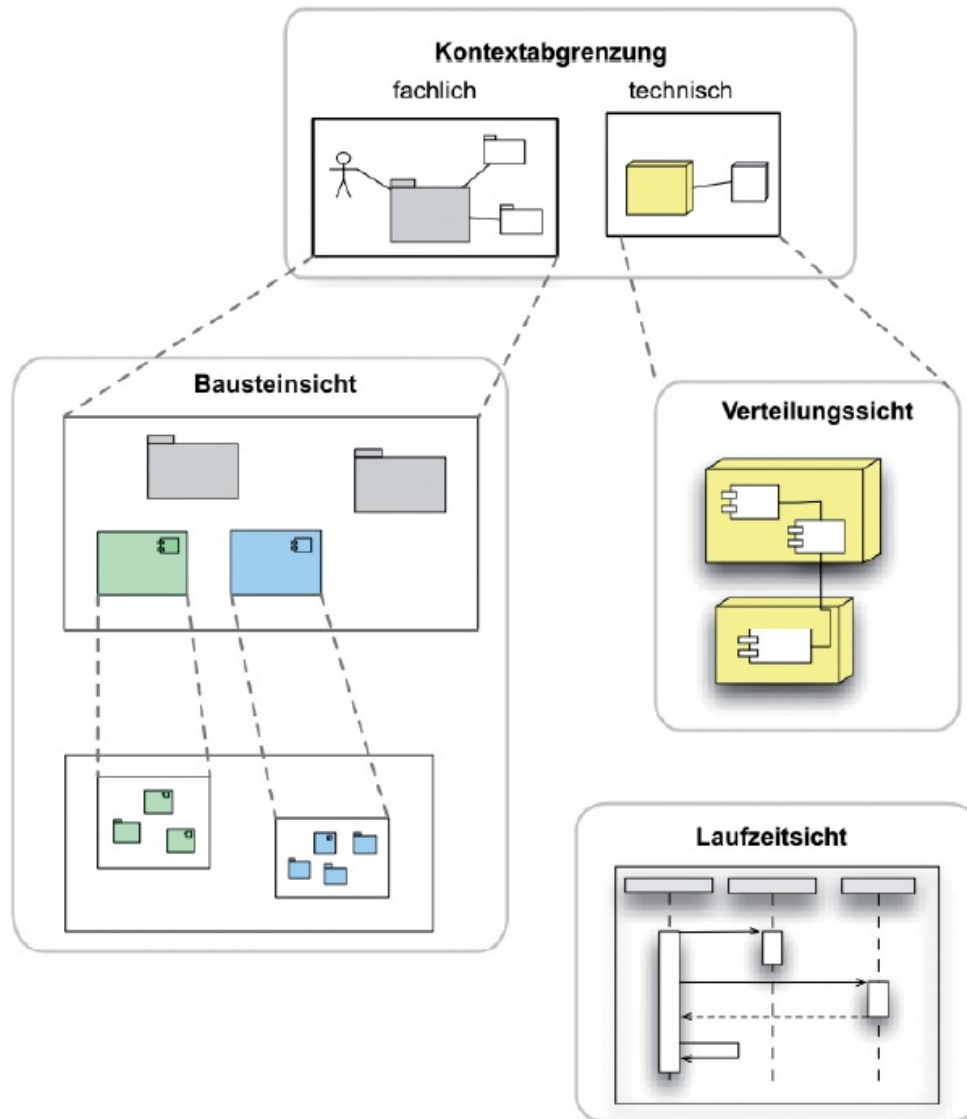# A new Code Model

Software quality consists of both external and internal quality.

Continuous Inspection is a holistic, fully-realized process designed to make internal code quality an integral part of the software development life cycle.

Drei wichtige Perspektiven: Baustein-, Laufzeit- und Verteilungssicht

Define a Context, Range and Scope of the Source Repository

max@kleiner.ch

Define a Rule Set

Checkstyle Metrik Java

FindBugs Java

FindBugs Security Audit Java

FindBugs Security Minimal Java

FxCop with MS minumum recommended ruleset C#

FxCop with MS minumum recommended ruleset of SharePoint C#
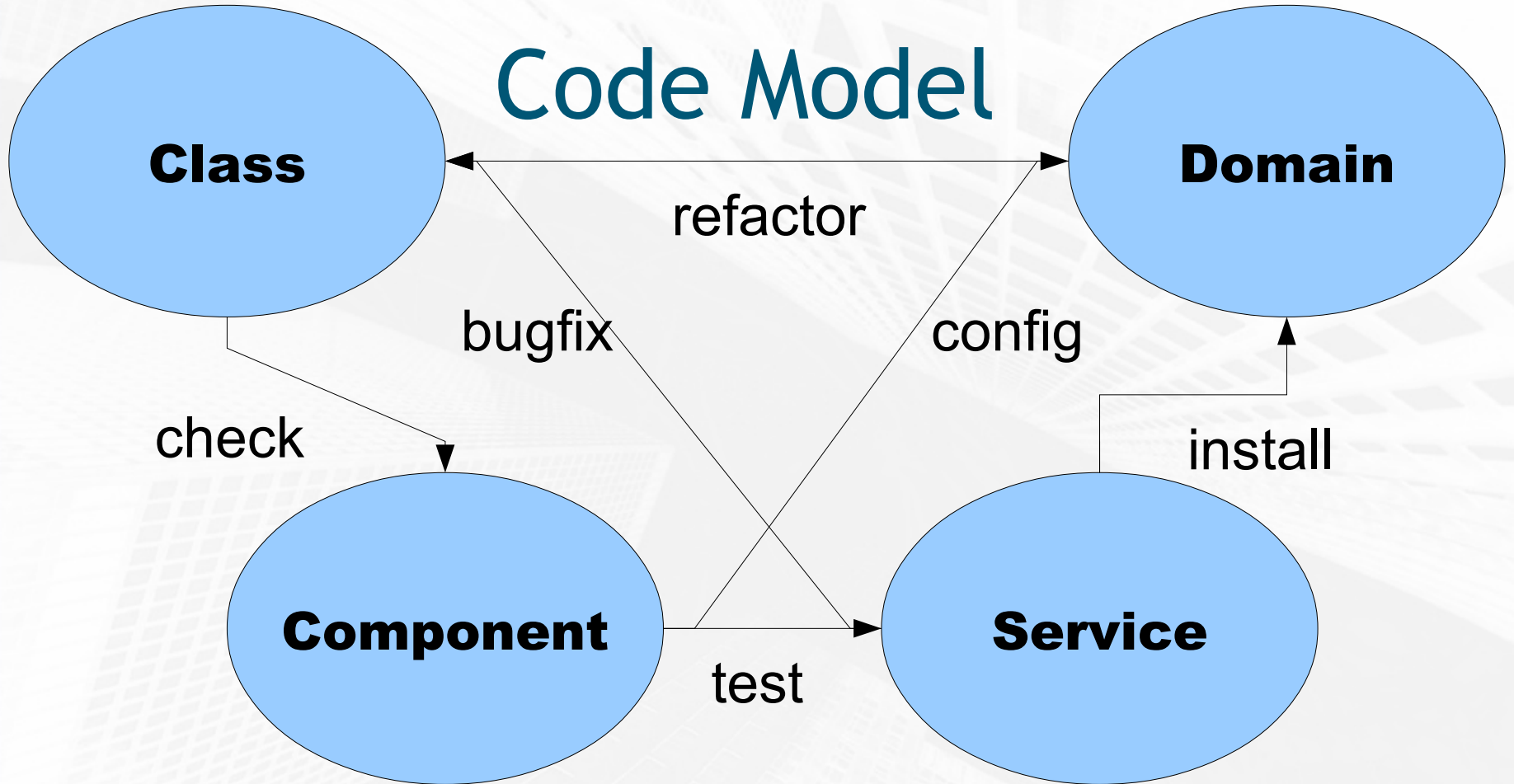
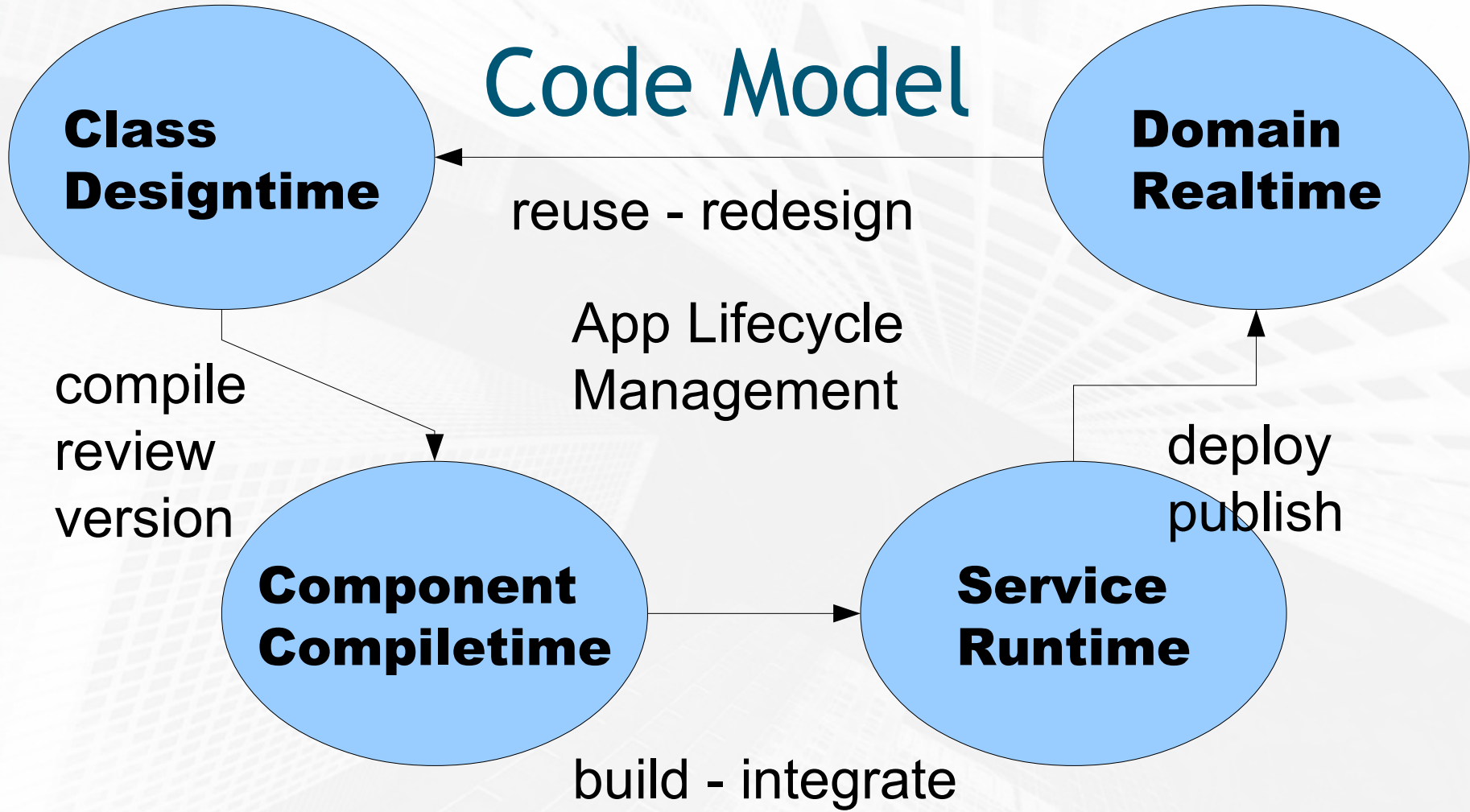Sonar way C#   Sonar way Java

Sonar way PL/SQL

Sonar way Python
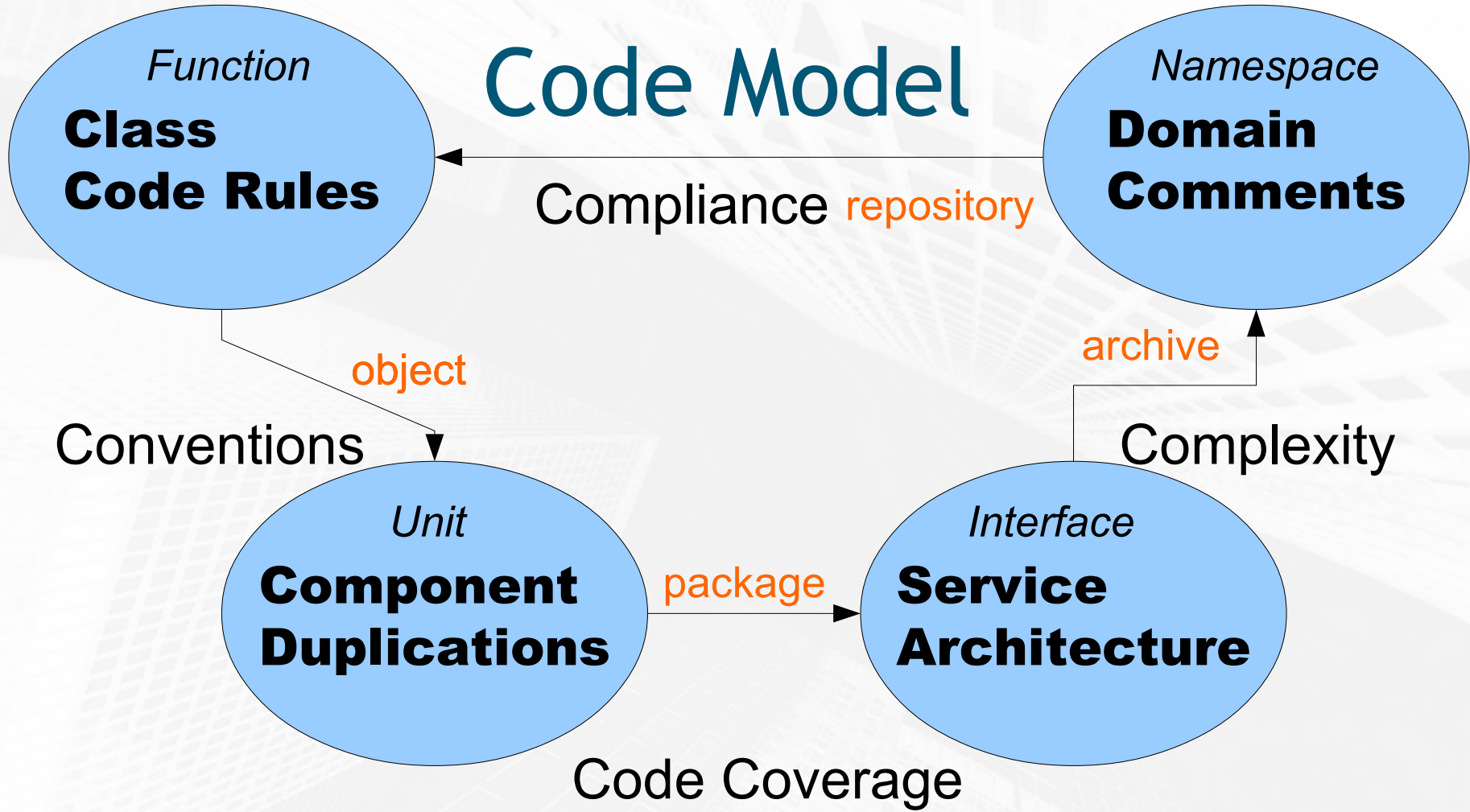
Sonar way Web / XML   Sonar way with Findbugs Java

SONAR_Rule_Set_Proposal_2015.pdf

Code Model

Class

Domain

Component

Service

refactor

bugfix

config

check

install

test

Code Model

Class Designtime

Domain Realtime

reuse - redesign

App Lifecycle Management

compile review version

deploy publish

Component Compiletime

Service Runtime

build - integrate

Code Model

Function
**Class
Code Rules**

Namespace
**Domain
Comments**

Compliance *repository*

object

Conventions

archive

Complexity

Unit
**Component
Duplications**

package

Interface
**Service
Architecture**

Code Coverage

Code Model Matrix *Function*

Process   If Temp >= 27 then

Information $+27^0\,C$

Data   27

Signal   00011011

layers

Interface

package   repository

Class   **Component**   **Service**   **Domain**

object

Unit

tiers

Namespace
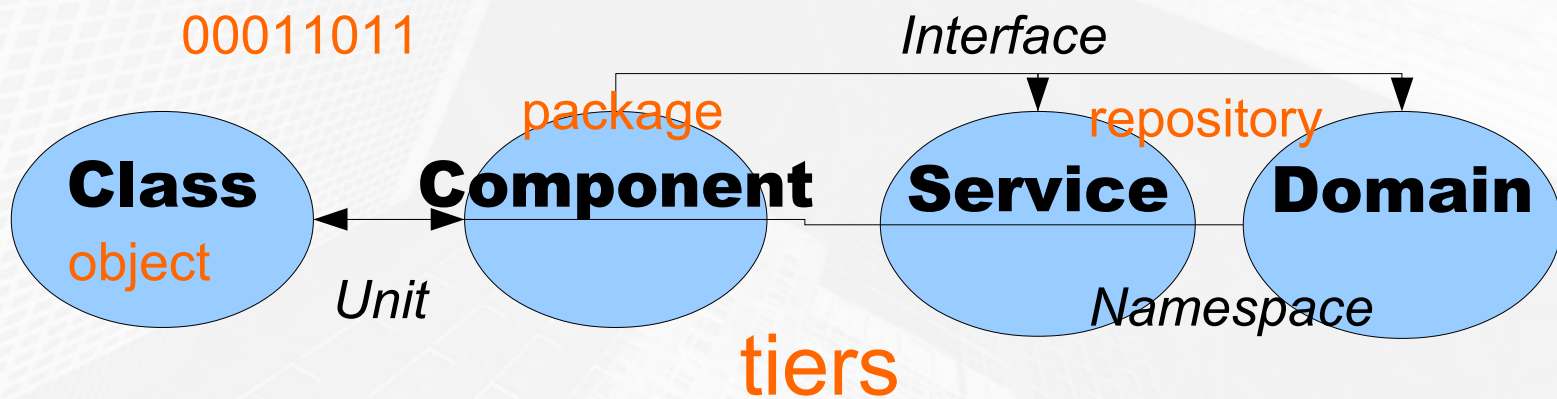
Code Model Matrix *Example*

```
function GetGEONameDistance2(loc1, loc2: string): double;
   var latf,lonf, latf1,lonf1: Double;
      geocode, geocode2: string;
   begin
     if isInternet then begin
      geocode:= GetGeoCode('xml','',loc1, false);
        latf:= GEOCoord2Point(geocode).x
        lonf:= GEOCoord2Point(geocode).y
      geocode2:= GetGeoCode('xml','',loc2, false);
        latf1:= GEOCoord2Point(geocode2).x
        lonf1:= GEOCoord2Point(geocode2).y
      result:= HaversineDist(latf,lonf,latf1, lonf1);
     end else writeln('No Internet Connection found');
   end;
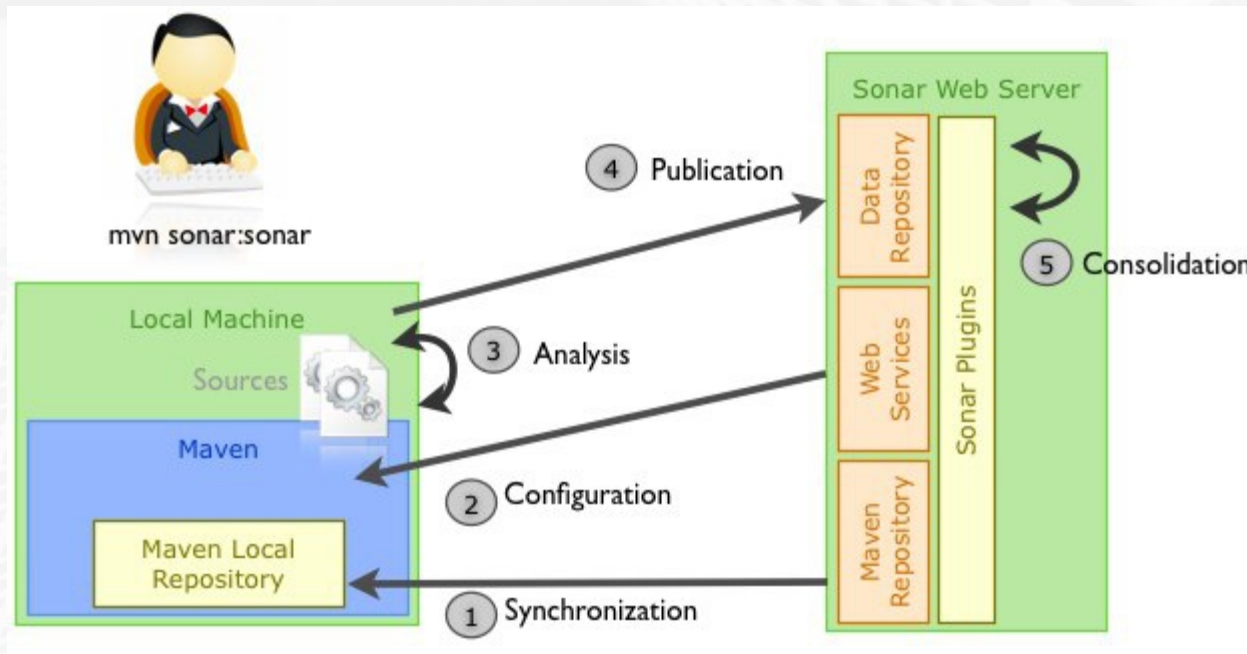```

Process

Information

Data

Signal

layers

package

repository

**Class**

object

**Component**

*Unit*

**Service**

**Domain**

*Namespace*

tiers

http://www.softwareschule.ch/examples/distance.txt

8
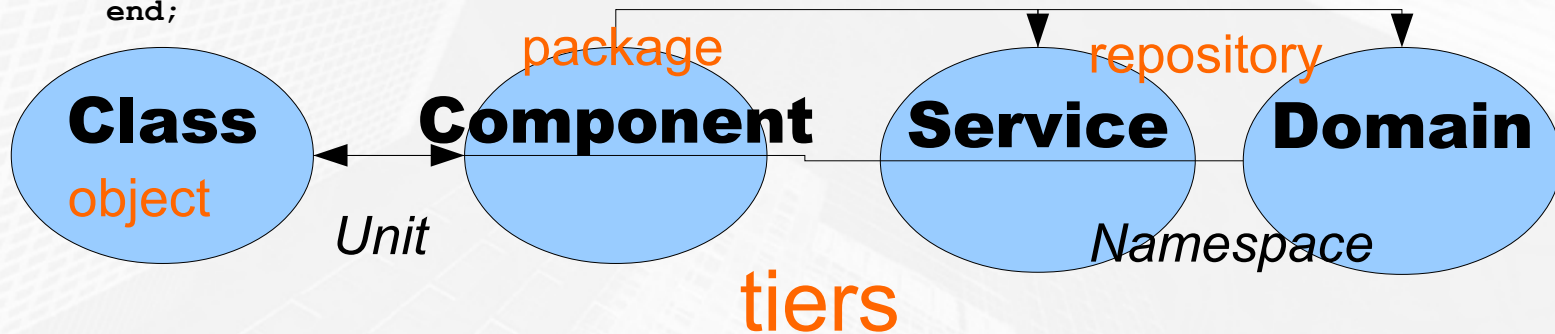
# Process Introduction

- **Continuous Integration & Inspection**

# Cockpit & Dashboard Intro