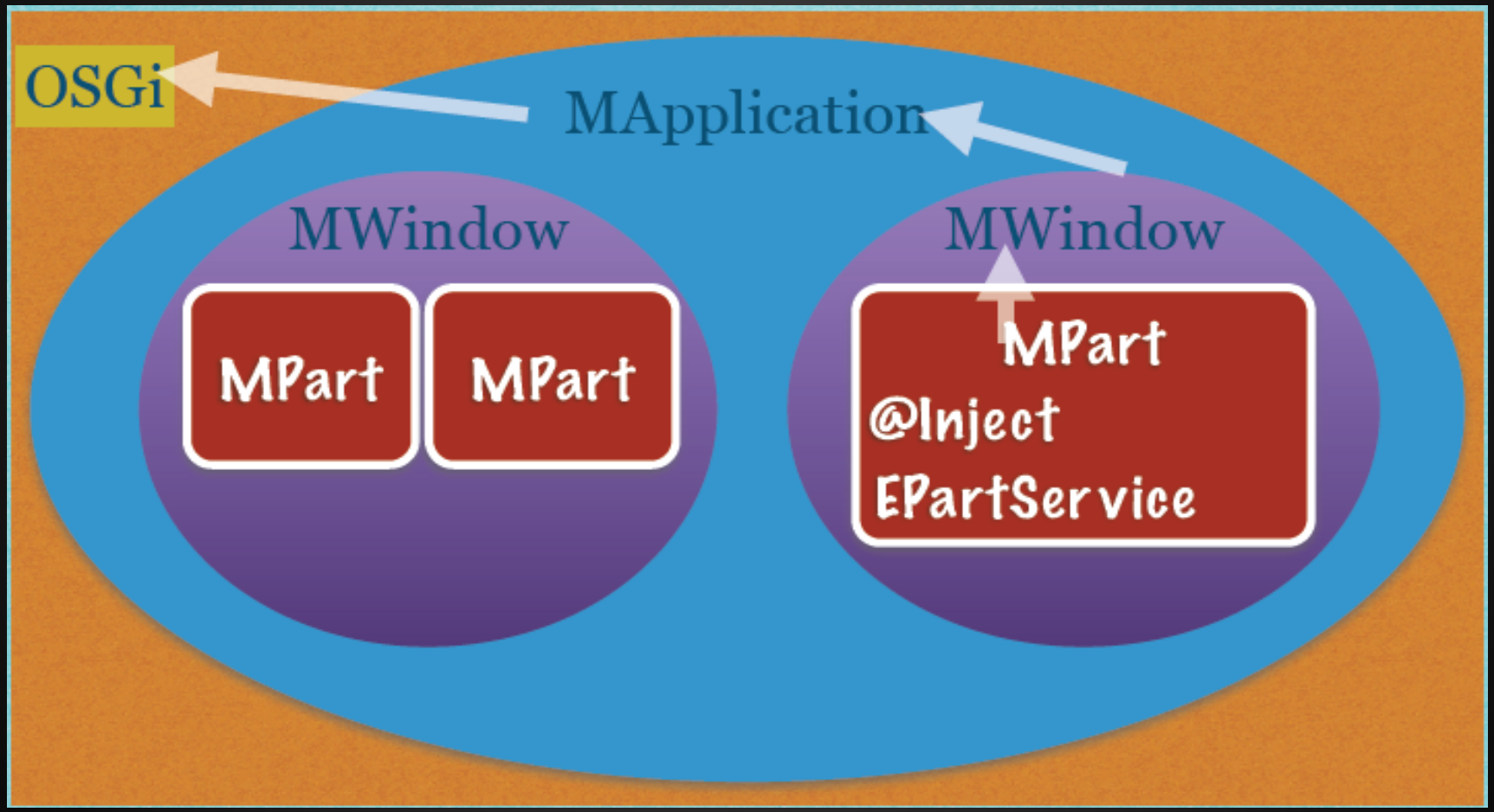
CONTEXT FUNCTIONS

CLASSIC CONTEXT LOOKUP



CONTEXT FUNCTION

- goes in when a specific key is requested
  - EPartService
  - EHandlerService
  - EYourCoolService, EYourCoolObject
- gives you the context in which this key was requested
  - Part 1 context?
  - Window 2 context?
- you implement the F in F(key,context)
  - so that it returns the runtime object

GUTS OF THE PLATFORM

@Inject private EHandlerServce handlerService

```
<scr:component xmlns:scr="http://www.osgi.org/xmlns/scr/v1.1.0" name="org.eclipse.e4.core.handlers">
   <implementation class="org.eclipse.e4.core.commands.internal.HandlerServiceCreationFunction"/>
   <service>
      <provide interface="org.eclipse.e4.core.contexts.IContextFunction"/>
   </service>
   <property name="service.context.key" type="String" value="org.eclipse.e4.core.commands.EHandlerService"/>
</scr:component>
```

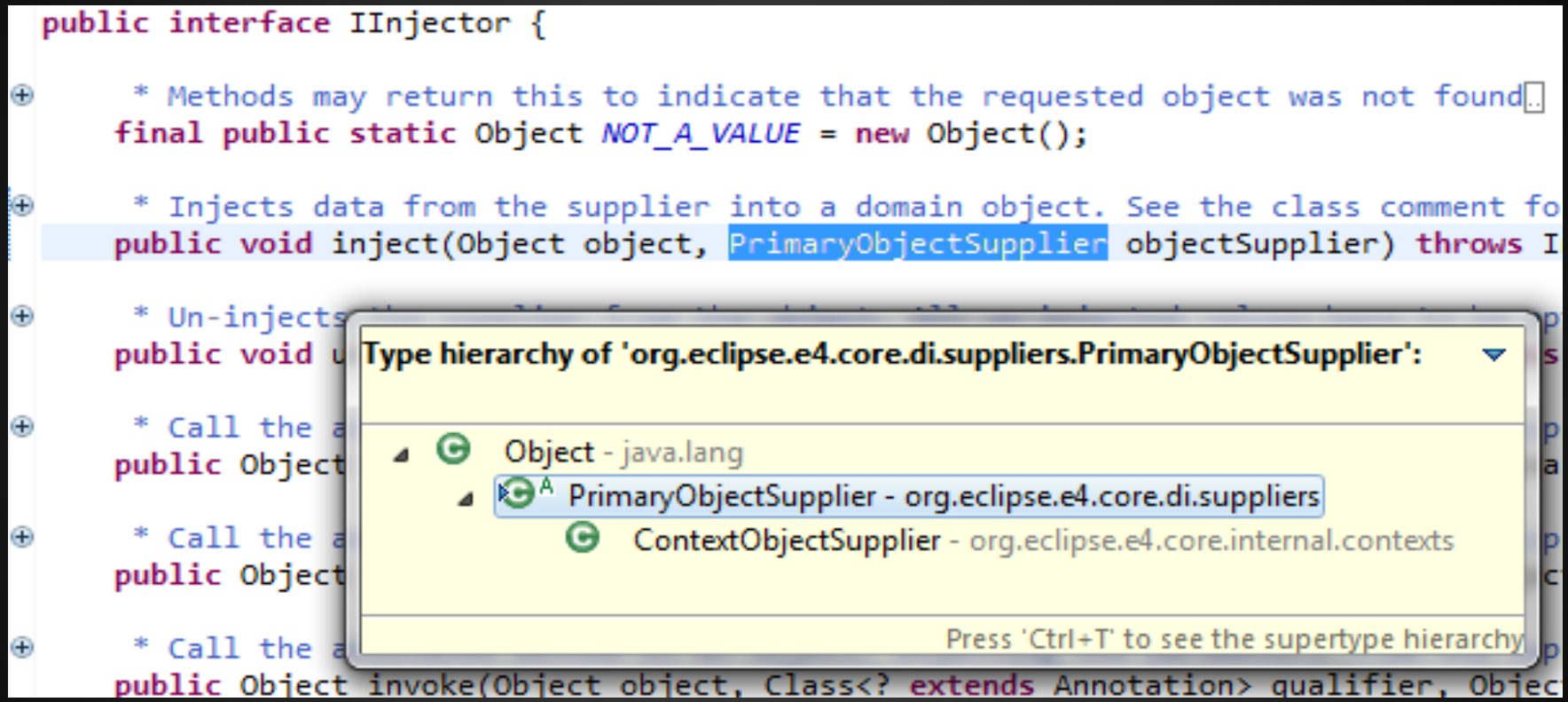
```
public class HandlerServiceCreationFunction extends ContextFunction {

    @Override
    public Object compute(IEclipseContext context) {
        return ContextInjectionFactory.make(HandlerServiceImpl.class, context);
    }
}
```

```
public Object compute(IEclipseContext context) {
    // look for the top-most MWindow in the context chain:

    // 1st: go up the tree to find topmost MWindow
    MWindow window = null;
    IEclipseContext current = context;
    do {
        MContext model = current.get(MContext.class);
        if (model instanceof MWindow)
            window = (MWindow) model;
        current = current.getParent();
    } while (current != null);

    if (window == null) {
        if (context.get(MApplication.class) != null) {
            // called from Application scope
            return ContextInjectionFactory.make(ApplicationPartServiceImpl.class, c
        }
        return IInjector.NOT_A_VALUE;
    }

    IEclipseContext windowContext = window.getContext();
    PartServiceImpl service = windowContext.getLocal(PartServiceImpl.class);
    if (service == null) {
        service = ContextInjectionFactory.make(PartServiceImpl.class, windowContext
        windowContext.set(PartServiceImpl.class, service);
    }
    return service;
}
```

@Inject
EPartService

OBJECT SUPPLIERS

What an injector needs



Extended Object Supplier

- goes in when an object is annotated with a specific annotation
  - @UIEventTopic Object object;
  - @UserData("admin") User user;
- gives you all you need (requestor, qualifier data etc.)
- needs you to describe how the injection of the dependency is made

SPECIFICALLY

- Link with the annotation

```
<scr:component xmlns:scr="http://www.osgi.org/xmlns/scr/v1.1.0" name="os.demo.suppliers">
   <implementation class="os.demo.suppliers.UserDataObjectSupplier"/>
   <service>
      <provide interface="org.eclipse.e4.core.di.suppliers.ExtendedObjectSupplier"/>
   </service>
   <property name="dependency.injection.annotation" type="String" value="os.demo.suppliers.annotation.UserData"/>
</scr:component>
```

- Implement the DI logic

```
public class UserDataObjectSupplier extends ExtendedObjectSupplier{

    @Override
    public Object get(IObjectDescriptor descriptor, IRequestor requestor,
            boolean track, boolean group) {

        return null;
    }

}
```

Meanwhile in the client of the DI

```
@PostConstruct
public void createComposite(Composite parent, @UserData User user){
    parent.setLayout(new GridLayout());
```