# VIGILCAP

Technical Due Diligence Report

Anonymized–Report

WALK AWAY

CRAP Index of 100/100 combined with TDR of 67.0% indicates asset is beyond economic repair.

Radar chart axes: Maintainability, Security, IP Cleanliness, Velocity, Scalability (scale 2, 4, 6, 8, 10)

67.0%	**$3,384,480**	**$5,054,449**
TECHNICAL DEBT RATIO	REMEDIATION CAPEX	REPLACEMENT COST

$507,672/yr	**$436,704**
TECHNICAL DEBT INTEREST (TDI) 15% Annual Velocity Drag	STATISTICAL LOSS EXPECTANCY CRI-Adjusted Breach Exposure

TOTAL NEGOTIATION LEVERAGE

$3,821,184

⚠ INTERNAL USE ONLY — Use with caution in negotiations

METHODOLOGY & QUANTITATIVE FRAMEWORK

1. Replacement Cost Estimation (COCOMO II)

The **Constructive Cost Model (COCOMO II)** estimates software development effort.

$$\text{Effort (Person-Months)} = 2.4 \times (\text{KLOC})^{1.05} \times \$15{,}000/\text{month}$$

2. Remediation CapEx Calculation

Complexity Debt	2 hrs/unit cyclomatic complexity
Security Debt	4 hrs/critical leak, 1 hr/minor
Database Debt	40 hrs/God Table, 4 hrs/Heap Table
Billable Rate	**$150/hr** (Senior Dev, blended)

3. Complexity Risk Index (CRAP)

$$\text{Raw CRAP} = CC^2 \times (1 - \text{coverage}/100)^3 + CC$$
$$\text{Normalized} = \min(100, \text{Raw}/100)$$

0-30: Maintainable | 31-50: Moderate | 51-79: High Risk | 80+: Critical

4. Technical Debt Ratio (TDR)

$$\text{TDR} = (\text{Remediation CapEx} / \text{Replacement Cost}) \times 100\%$$

< 10%	Healthy — Proceed
10-20%	Moderate — Consider adjustment
21-50%	High — Renegotiate/escrow
> 50%	Critical — Walk Away

> **Sources:** COCOMO II (Boehm, 1995). CRAP Index (Crap4j). Cyclomatic Complexity (McCabe, 1976).

Executive Summary

CRITICAL ARCHITECTURAL WARNING: The automated analysis has detected severe cyclomatic complexity (CRAP Index: 100/100, TDR: 67.0%). This indicates a monolithic architecture with high coupling. The remediation liability stands at $3,384,480. While specific strategic nuance requires human review, the mathematical density of the codebase guarantees high remediation costs and regression risks during feature development. Proceed with extreme caution and consider requiring a substantial repair escrow.

730	1	5/10
FILES ANALYZED	SECURITY ISSUES	BUS FACTOR*

*Bus Factor: Minimum team members who could leave before project becomes unmaintainable. 1-3 = Critical | 4-6 = Concerning | 7-10 = Healthy

Codebase Hotspot Map

Each rectangle represents a file, sized by lines of code. Colors show **relative complexity** within this codebase: Red = Most Complex, Green = Least Complex. High-complexity files are harder to maintain and more prone to bugs.
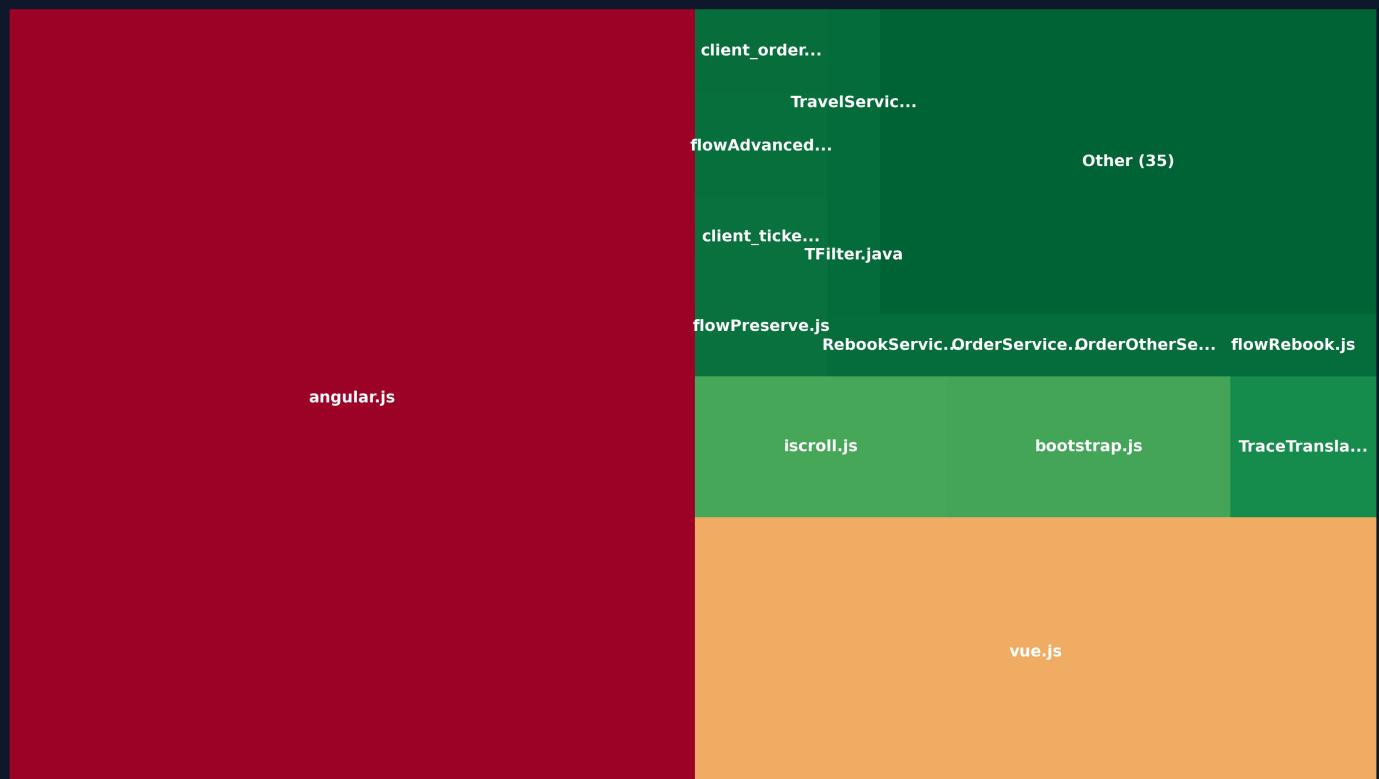
Section 01: Technical Solvency Assessment

Framework 1.02 — Asset integrity metrics measuring operational continuity risk and EBITDA margin erosion exposure.

33	**$3,384,480**	**67.0%**
TECHNICAL SOLVENCY SCORE (TSS) 100 = Pristine | 0 = Insolvent	REMEDIATION CAPEX LIABILITY Day-1 Post-Close Investment	TECHNICAL DEBT RATIO Debt / Replacement Cost

Complexity Risk Index (CRI) Hotspots

> **📊 What is the Complexity Risk Index (CRI)?**
>
> **CRI** (Complexity Risk Index) measures code maintainability risk by combining Cyclomatic Complexity with Test Coverage. High scores indicate code that is both complex and poorly tested—a significant liability in M&A scenarios.
>
> Risk Scale (0-100):
>
> | 0-30 OK | 30-50 HIGH | 50-80 SEVERE | 80+ CRITICAL |
> |---|---|---|---|

Files exceeding threshold indicate elevated defect probability and maintenance cost.

Rank	File	CRAP Index	Complexity	Risk Impact
1	ts-ui-dashboard/static/assets/js/angular.js	100.0	2532	CRITICAL — Refactor Required
2	ts-ui-dashboard/static/assets/js/vue.js	100.0	1744	CRITICAL — Refactor Required
3	ts-ui-dashboard/static/assets/js/iscroll.js	100.0	450	CRITICAL — Refactor Required
4	ts-ui-dashboard/static/js/bootstrap.js	100.0	449	CRITICAL — Refactor Required
5	old-docs/Json2Shiviz/src/main/java/org/services/analysis/TraceTranslator.java	100.0	267	CRITICAL — Refactor Required
6	ts-ui-dashboard/static/js/flowPreserve.js	100.0	125	CRITICAL — Refactor Required
7	ts-ui-dashboard/static/assets/js/client_ticket_book.js	100.0	120	CRITICAL — Refactor Required
8	ts-ui-dashboard/static/js/flowAdvancedSearch.js	100.0	118	CRITICAL — Refactor Required

+ 2 additional hotspots

> **🏛 Architectural Instability Assessment**
>
> Instability Index measures coupling fragility. High instability in core modules indicates integration risk and elevated post-acquisition maintenance burden.
>
> **Documentation Ratio:** Low Confidence (Data Unavailable) — Knowledge transfer risk CRITICAL - No inline docs detected

Strategic Risk Analysis

Severity	Risk	Impact	Est. Capex
HIGH	Credential Exposure	1 exposed secret(s) - Immediate breach liability	$50,000
HIGH	Structural Insolvency	Refactoring required before roadmap execution	$3,384,480
HIGH	Excessive Technical Debt	TDR of 67.0% indicates code quality issues that will impact velocity	$1,353,792

Security Deep Dive (1 findings - 1 Critical/High)

#	Severity	Rule	File	Line
1	CRITICAL	generic-api-key	old-docs/k8s-cluster.txt	73

#	Severity	Rule	File	Line
	CRITICAL	generic-api-key	old-docs/k8s-cluster.txt	73

Open Source Liability (High Risk)

Showing top high-risk dependencies. See Appendix A for full manifest.

Package	Version	Status	Risk	Action

✓ No High-Risk Licenses (GPL/AGPL) Detected in 383 Scanned Packages

Open Source Liability (High Risk)

Package	Version	Status	Risk	Action

✓ No High-Risk Licenses (GPL/AGPL) Detected in 383 Scanned Packages

Database Architecture Audit

1	**0**	**0**
SCHEMA FILES	TABLES FOUND	"GOD TABLES" (>50 COLS)

0
"HEAP TABLES" (NO PK)

✓ No critical database architecture issues detected.

Appendix C: Compliance Readiness Matrix

D	55/100	2
COMPLIANCE GRADE 1 FAILED control(s)	READINESS SCORE	CONTROL VIOLATIONS

2
STANDARDS AFFECTED
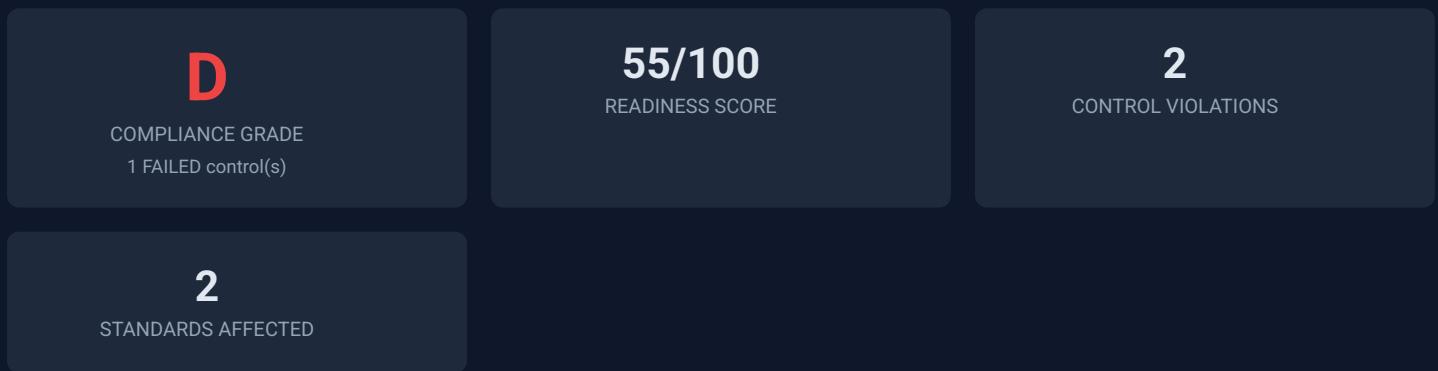
Standards Impacted: ISO 27001, SOC 2

SOC 2

Control	Description	Status	Evidence
CC6.6	Encryption Key Management	FAILED	Encryption keys exposed in source code

ISO 27001

Control	Description	Status	Evidence
A.10.1.2	Key Management	NON-COMPLIANT	Cryptographic keys not properly protected

Appendix A: Full Dependency Manifest (383 items)

Package	Version	Type	Origin File
fs	0.0.1-security	RISK	
click	7.1.2	dev	
dlib	19.21.1	dev	
Flask	1.1.2	dev	
gunicorn	20.0.4	dev	
itsdangerous	1.1.0	dev	
Jinja2	2.11.3	dev	
MarkupSafe	1.1.1	dev	
numpy	1.19.5	dev	
opencv-python	4.5.1.48	dev	
Pillow	8.1.2	dev	
Werkzeug	1.0.1	dev	
body-parser	1.18.2	dev	
cookie-parser	1.4.3	dev	
debug	2.6.9	dev	
express	4.15.5	dev	
jade	1.11.0	dev	
mongo	0.1.0	dev	
morgan	1.9.0	dev	
mysql	2.18.1	dev	
serve-favicon	2.4.5	dev	
cryptography	latest	dev	
tornado	latest	dev	
pymysql	latest	dev	
mime-types	2.1.16	dev	
negotiator	0.6.1	dev	
eslint	3.19.0	dev	
eslint-config-standard	10.2.1	dev	
eslint-plugin-import	2.7.0	dev	
eslint-plugin-markdown	1.0.0-beta.6	dev	
eslint-plugin-node	5.1.1	dev	
eslint-plugin-promise	3.5.0	dev	
eslint-plugin-standard	3.0.1	dev	
istanbul	0.4.5	dev	
mocha	1.21.5	dev	
babel-core	5.6.15	dev	
babelify	6.1.2	dev	
browserify	10.2.4	dev	
browserify-derequire	0.9.4	dev	

Package	Version	Type	Origin File
unicode-7.0.0	0.1.5	dev	
acorn	2.1.0	dev	
testit	2.0.2	dev	
kind-of	3.0.2	dev	
longest	1.0.1	dev	
repeat-string	1.5.2	dev	
should	*	dev	
word-wrap	1.0.3	dev	
pre-commit	1.0.7	dev	
standard	3.7.3	dev	
babel-minify	0.5.1	dev	
benchmark	2.1.4	dev	
tape	4.x	dev	
safe-buffer	5.1.1	dev	
bytes	3.0.0	dev	
content-type	1.0.4	dev	
depd	1.1.1	dev	
http-errors	1.6.2	dev	
iconv-lite	0.4.19	dev	
on-finished	2.3.0	dev	
qs	6.5.1	dev	
raw-body	2.3.2	dev	
type-is	1.6.15	dev	
methods	1.1.2	dev	
supertest	1.1.0	dev	
buffer	5.6.0	dev	
@babel/plugin-external-helpers	7.10.4	dev	
@babel/preset-env	7.11.0	dev	
@istanbuljs/nyc-config-typescript	1.0.1	dev	
@microsoft/api-extractor	7.28.0	dev	
@rollup/plugin-babel	5.2.0	dev	
@rollup/plugin-commonjs	15.0.0	dev	
@rollup/plugin-json	4.1.0	dev	
@rollup/plugin-node-resolve	9.0.0	dev	
@rollup/plugin-replace	4.0.0	dev	
@rollup/plugin-typescript	6.0.0	dev	
@types/node	18.0.0	dev	
@typescript-eslint/eslint-plugin	5.30.0	dev	
@typescript-eslint/parser	5.30.0	dev	
array-includes	3.1.3	dev	
chai	4.2.0	dev	
eslint-config-prettier	8.5.0	dev	

Package	Version	Type	Origin File
eslint-plugin-prettier	4.1.0	dev	
eslint-plugin-tsdoc	0.2.16	dev	
karma	6.3.4	dev	
karma-chai	0.1.0	dev	
karma-chrome-launcher	3.1.0	dev	
karma-mocha	2.0.1	dev	
karma-mocha-reporter	2.2.5	dev	
karma-rollup-preprocessor	7.0.5	dev	
node-fetch	2.6.1	dev	
nyc	15.1.0	dev	
object.entries	1.1.5	dev	
prettier	2.7.1	dev	
rimraf	3.0.2	dev	
rollup	2.26.5	dev	
rollup-plugin-commonjs	10.1.0	dev	
rollup-plugin-node-globals	1.4.0	dev	
rollup-plugin-node-polyfills	0.2.1	dev	
rollup-plugin-polyfill-node	0.7.0	dev	
standard-version	9.5.0	dev	
ts-node	9.0.0	dev	
tsd	0.21.0	dev	
typescript	4.7.4	dev	
typescript-cached-transpile	0.0.6	dev	
uuid	8.3.2	dev	
base64-js	1.3.1	dev	
ieee754	1.1.13	dev	
airtap	3.0.0	dev	
concat-stream	2.0.0	dev	
hyperquest	2.1.3	dev	
is-buffer	2.0.4	dev	
is-nan	1.3.0	dev	
split	1.0.1	dev	
through2	4.0.2	dev	
uglify-js	3.11.3	dev	
ava	0.0.4	dev	
align-text	0.1.3	dev	
lazy-cache	1.0.3	dev	
better-assert	1.0.0	dev	
commander	2.8.x	dev	
source-map	0.4.x	dev	
http-proxy	1.x	dev	
jshint	2.8.x	dev	

Package	Version	Type	Origin File
nock	2.x	dev	
server-destroy	1.x	dev	
vows	0.8.x	dev	
center-align	0.1.1	dev	
right-align	0.1.1	dev	
wordwrap	0.0.2	dev	
blanket	1.1.6	dev	
coveralls	2.11.2	dev	
mocha-lcov-reporter	0.0.2	dev	
mocoverage	1.0.0	dev	
patched-blanket	1.0.1	dev	
cookie	0.3.1	dev	
cookie-signature	1.0.6	dev	
tap	2.3.0	dev	
css-parse	1.0.4	dev	
css-stringify	1.0.5	dev	
ms	2.0.0	dev	
concurrently	3.1.0	dev	
karma-phantomjs-launcher	1.0.2	dev	
karma-sinon	1.0.5	dev	
sinon	1.17.6	dev	
sinon-chai	2.8.0	dev	
xo	*	dev	
codecov	3.8.3	dev	
double-ended-queue	2.1.0-0	dev	
beautify-benchmark	0.2.4	dev	
seedrandom	2.4.3	dev	
accepts	1.3.3	dev	
array-flatten	1.1.1	dev	
content-disposition	0.5.2	dev	
encodeurl	1.0.1	dev	
escape-html	1.0.3	dev	
etag	1.8.0	dev	
finalhandler	1.0.6	dev	
fresh	0.5.2	dev	
merge-descriptors	1.0.1	dev	
parseurl	1.3.1	dev	
path-to-regexp	0.1.7	dev	
proxy-addr	1.1.5	dev	
range-parser	1.2.0	dev	
send	0.15.6	dev	
serve-static	1.12.6	dev	

Package	Version	Type	Origin File
setprototypeof	1.0.3	dev	
statuses	1.3.1	dev	
utils-merge	1.0.0	dev	
vary	1.1.1	dev	
after	0.8.2	dev	
connect-redis	2.4.1	dev	
cookie-session	1.3.1	dev	
ejs	2.5.7	dev	
express-session	1.15.5	dev	
hbs	4.0.1	dev	
marked	0.3.6	dev	
method-override	2.3.9	dev	
multiparty	4.1.3	dev	
pbkdf2-password	1.2.1	dev	
vhost	3.0.2	dev	
unpipe	1.0.0	dev	
readable-stream	2.3.3	dev	
inherits	2.0.3	dev	
async	*	dev	
errto	*	dev	
iconv	*	dev	
request	*	dev	
semver	*	dev	
unorm	*	dev	
coffee-script	1.12.6	dev	
nodeunit	0.8.2 <0.8.7	dev	
zuul	3.0.0	dev	
character-parser	1.2.1	dev	
clean-css	3.1.9	dev	
constantinople	3.0.1	dev	
jstransformer	0.0.2	dev	
mkdirp	0.5.0	dev	
transformers	2.1.0	dev	
void-elements	2.0.1	dev	
with	4.0.0	dev	
browserify-middleware	4.1.0	dev	
code-mirror	3.22.0	dev	
github-basic	4.1.2	dev	
handle	1.0.0	dev	
highlight-codemirror	4.1.0	dev	
inconsolata	0.0.2	dev	
jade-code-mirror	1.0.5	dev	

Package	Version	Type	Origin File
jade-highlighter	1.0.5	dev	
jstransformer-cdata	0.0.3	dev	
jstransformer-coffee-script	0.0.2	dev	
jstransformer-less	1.0.0	dev	
jstransformer-marked	0.0.1	dev	
jstransformer-stylus	0.0.1	dev	
jstransformer-verbatim	0.0.2	dev	
less	2.0.0	dev	
less-file	0.0.9	dev	
linify	*	dev	
lsr	1.0.0	dev	
opener	1.3.0	dev	
pull-request	3.0.0	dev	
stop	3.0.0-rc1	dev	
stylus	*	dev	
twbs	0.0.6	dev	
is-promise	2.0.0	dev	
promise	6.0.1	dev	
ansi-bold	0.1.1	dev	
benchmarked	1.0.0	dev	
glob	7.1.1	dev	
gulp-format-md	0.1.12	dev	
type-of	2.0.1	dev	
typeof	1.0.0	dev	
ansi-yellow	0.1.1	dev	
fill-range	2.1.0	dev	
mime-db	1.2.0	dev	
bluebird	3.5.0	dev	
co	4.6.0	dev	
cogent	1.0.1	dev	
csv-parse	1.2.1	dev	
gnode	0.1.2	dev	
stream-to-array	2.3.0	dev	
covert	1.0.0	dev	
minimist	1.2.6	dev	
mongodb	*	dev	
bson	4.6.5	dev	
denque	2.0.1	dev	
mongodb-connection-string-url	2.5.2	dev	
socks	2.6.2	dev	
@iarna/toml	2.2.5	dev	
@microsoft/tsdoc-config	0.16.1	dev	

Package	Version	Type	Origin File
@mongodb-js/zstd	1.0.0	dev	
@types/chai	4.3.1	dev	
@types/chai-subset	1.3.3	dev	
@types/express	4.17.13	dev	
@types/kerberos	1.1.1	dev	
@types/mocha	9.1.1	dev	
@types/saslprep	1.0.1	dev	
@types/semver	7.3.9	dev	
@types/sinon	10.0.11	dev	
@types/sinon-chai	3.2.8	dev	
@types/whatwg-url	8.2.1	dev	
chai-subset	1.6.0	dev	
chalk	4.1.2	dev	
eslint-plugin-simple-import-sort	7.0.0	dev	
js-yaml	4.1.0	dev	
mocha-sinon	2.1.2	dev	
source-map-support	0.5.21	dev	
xml2js	0.4.23	dev	
yargs	17.5.1	dev	
whatwg-url	11.0.0	dev	
eslint-config-semistandard	15.0.1	dev	
gen-esm-wrapper	1.1.3	dev	
basic-auth	2.0.0	dev	
on-headers	1.0.1	dev	
expect.js	0.3.1	dev	
husky	0.13.3	dev	
lint-staged	3.4.1	dev	
bignumber.js	9.0.0	dev	
sqlstring	2.3.1	dev	
timezone-mock	0.0.7	dev	
urun	0.0.8	dev	
utest	0.0.8	dev	
ee-first	1.1.1	dev	
hashish	0.0.4	dev	
fast-url-parser	1.1.3	dev	
asap	1.0.0	dev	
promises-aplus-tests	*	dev	
forwarded	0.1.0	dev	
ipaddr.js	1.4.0	dev	
@ljharb/eslint-config	12.2.1	dev	
editorconfig-tools	0.1.1	dev	
evalmd	0.0.17	dev	

Package	Version	Type	Origin File
qs-iconv	1.0.4	dev	
safe-publish-latest	1.1.1	dev	
ansi-cyan	0.1.1	dev	
isobject	2.1.0	dev	
repeating	3.0.0	dev	
text-table	0.2.0	dev	
yargs-parser	4.0.2	dev	
sparse-bitfield	3.0.3	dev	
@nodertc/eslint-config	0.2.1	dev	
jest	23.6.0	dev	
destroy	1.0.4	dev	
mime	1.3.4	dev	
temp-path	1.0.0	dev	
tslint	5.18.0	dev	
ip	2.0.0	dev	
smart-buffer	4.2.0	dev	
@types/ip	1.1.0	dev	
amdefine	0.0.4	dev	
dryice	0.4.8	dev	
memory-pager	1.0.2	dev	
buffer-alloc	1.1.0	dev	
punycode	2.1.1	dev	
@domenic/eslint-config	1.4.0	dev	
@unicode/unicode-14.0.0	1.2.1	dev	
minipass-fetch	1.4.1	dev	
regenerate	1.4.2	dev	
css	1.0.8	dev	
atpl	*	dev	
coffeecup	*	dev	
coffeekup	*	dev	
component-builder	*	dev	
cson	*	dev	
dot	*	dev	
dust	*	dev	
dustjs-linkedin	*	dev	
eco	*	dev	
ect	*	dev	
haml-coffee	*	dev	
hamljs	*	dev	
handlebars	*	dev	
highlight.js	*	dev	
hogan.js	*	dev	

Package	Version	Type	Origin File
html2jade	*	dev	
jazz	*	dev	
jqtpl	*	dev	
just	*	dev	
liquor	*	dev	
markdown	*	dev	
markdown-js	*	dev	
mote	*	dev	
mustache	*	dev	
plates	*	dev	
qejs	*	dev	
sass	*	dev	
supermarked	*	dev	
swig	*	dev	
templayed	*	dev	
then-jade	*	dev	
toffee	*	dev	
underscore	*	dev	
walrus	*	dev	
whiskers	*	dev	
media-typer	0.3.0	dev	
uglify-to-browserify	1.0.0	dev	
cheerio	0.18.0	dev	
tr46	3.0.0	dev	
webidl-conversions	7.0.0	dev	
domexception	4.0.0	dev	
got	11.8.2	dev	
webidl2js	17.0.0	dev	
acorn-globals	1.0.3	dev	
expresso	0.7.x	dev	
camelcase	1.0.2	dev	
cliui	2.1.0	dev	
decamelize	1.0.0	dev	
window-size	0.1.0	dev	
doctoc	0.15.0	dev	
webpack	1.12.0	dev	
mocha-as-promised	1.2.1	dev	
optimist	0.3.5	dev	
core-util-is	1.0.0	dev	
isarray	1.0.0	dev	
process-nextick-args	2.0.0	dev	
string_decoder	1.1.1	dev	

Package	Version	Type	Origin File
util-deprecate	1.0.1	dev	
assert	1.4.0	dev	
babel-polyfill	6.9.1	dev	
lolex	2.3.2	dev	
graceful-readlink	1.0.0	dev	
@types/webidl-conversions	*	dev	
com.google.guava:guava	21.0	dev	
junit:junit	4.12	dev	

Appendix B: Codebase Complexity Ledger (Top 200 of 50 files)

#	File	Complexity	Lines	Language
1	ts-ui-dashboard/static/assets/js/angular.js	2532	31,768	JS
2	ts-ui-dashboard/static/assets/js/vue.js	1744	10,947	JS
3	ts-ui-dashboard/static/assets/js/iscroll.js	450	2,121	JS
4	ts-ui-dashboard/static/js/bootstrap.js	449	2,377	JS
5	old-docs/Json2Shiviz/src/main/java/org/services/analysis/TraceTranslator.java	267	1,226	Java
6	ts-ui-dashboard/static/js/flowPreserve.js	125	796	JS
7	ts-ui-dashboard/static/assets/js/client_ticket_book.js	120	617	JS
8	ts-ui-dashboard/static/js/flowAdvancedSearch.js	118	833	JS
9	ts-ui-dashboard/static/assets/js/client_order_list.js	102	663	JS
10	ts-rebook-service/src/main/java/rebook/service/RebookServiceImpl.java	96	475	Java
11	ts-order-service/src/main/java/order/service/OrderServiceImpl.java	95	470	Java
12	ts-order-other-service/src/main/java/other/service/OrderOtherServiceImpl.java	94	477	Java
13	ts-ui-dashboard/static/js/flowRebook.js	92	621	JS
14	old-docs/Lib/ms-monitoring-core/src/main/java/org/myproject/ms/monitoring/instrument/web/TFilter.java	83	371	Java
15	ts-travel-service/src/main/java/travel/service/TravelServiceImpl.java	82	584	Java
16	ts-travel2-service/src/main/java/travel2/service/TravelServiceImpl.java	69	497	Java
17	ts-basic-service/src/main/java/fdse/microservice/service/BasicServiceImpl.java	67	485	Java
18	ts-ui-dashboard/static/assets/js/index.js	62	327	JS
19	ts-cancel-service/src/main/java/cancel/service/CancelServiceImpl.java	60	336	Java
20	ts-food-service/src/main/java/foodsearch/service/FoodServiceImpl.java	54	312	Java
21	ts-ui-dashboard/static/js/bs_main.js	53	284	JS
22	ts-inside-payment-service/src/main/java/inside_payment/service/InsidePaymentServiceImpl.java	50	370	Java
23	ts-admin-travel-service/src/main/java/admintravel/service/AdminTravelServiceImpl.java	49	289	Java
24	ts-ui-dashboard/static/js/notification.js	46	113	JS
25	ts-ui-dashboard/static/assets/js/echarts.min.js	45	35	JS
26	old-docs/Lib/ms-monitoring-core/src/main/java/org/myproject/ms/monitoring/Item.java	45	580	Java
27	ts-preserve-other-service/src/main/java/preserveOther/service/PreserveOtherServiceImpl.java	44	436	Java
28	ts-preserve-service/src/main/java/preserve/service/PreserveServiceImpl.java	44	433	Java
29	ts-ui-dashboard/static/js/orderRebook.js	42	113	JS
30	ts-ui-dashboard/static/assets/js/client_adsearch.js	41	210	JS
31	ts-ui-dashboard/static/js/basicInformation.js	40	104	JS
32	ts-ui-dashboard/static/js/ticketInformation.js	40	102	JS
33	old-docs/Lib/ms-monitoring-core/src/main/java/org/myproject/ms/monitoring/trace/DChainer.java	40	264	Java
34	old-docs/Lib/ms-monitoring-core/src/main/java/org/myproject/ms/monitoring/antn/SleuthAdvisorConfig.java	38	295	Java
35	old-docs/ts-ui-test/src/test/java/TestFlowOne.java	37	264	Java
36	ts-ui-dashboard/static/js/upload.js	36	167	JS
37	ts-execute-service/src/main/java/execute/serivce/ExecuteServiceImpl.java	36	191	Java
38	ts-ui-dashboard/static/assets/js/old_index.js	34	408	JS

#	File	Complexity	Lines	Language
39	`ts-ui-dashboard/static/assets/js/admin_travel.js`	33	382	JS
40	`ts-ui-dashboard/static/assets/js/aliyun-oss-sdk.min.js`	32	18	JS
41	`ts-route-plan-service/src/main/java/plan/service/RoutePlanServiceImpl.java`	32	356	Java
42	`ts-assurance-service/src/main/java/assurance/service/AssuranceServiceImpl.java`	32	158	Java
43	`ts-ui-dashboard/static/js/contacts.js`	31	193	JS
44	`ts-ui-dashboard/static/js/order.js`	30	173	JS
45	`ts-ui-dashboard/static/js/register.js`	30	69	JS
46	`ts-ui-dashboard/static/js/ticketOffice.js`	30	310	JS
47	`old-docs/Lib/ms-monitoring-core/src/main/java/org/myproject/ms/monitoring/instrument/web/THInter.java`	27	180	Java
48	`ts-ui-dashboard/static/js/travel.js`	26	277	JS
49	`ts-order-other-service/src/main/java/other/entity/Order.java`	25	119	Java
50	`ts-wait-order-service/src/main/java/waitorder/service/Impl/WaitListOrderServiceImpl.java`	25	174	Java

GLOSSARY OF TERMS

Technical Debt Vocabulary for M&A Professionals

Technical Debt Ratio (TDR)

The ratio of remediation cost to replacement cost, expressed as a percentage. A TDR of 25% means it costs $0.25 to fix the codebase for every $1.00 it would cost to rebuild from scratch. Industry threshold for "Walk Away" is typically >50%.

Cyclomatic Complexity

A quantitative measure of the number of linearly independent paths through a program's source code. Higher values indicate more complex code that is harder to test and maintain. Calculated by counting decision points (if, for, while, case).

Bus Factor

The minimum number of team members who would need to be hit by a bus (or leave) before a project stalls due to lack of knowledge. A Bus Factor of 1 means all critical knowledge resides in a single person—a severe M&A risk.

Remediation CapEx

Capital Expenditure required to remediate identified technical debt, security vulnerabilities, and architectural issues. Expressed in USD, calculated by multiplying estimated hours by the hourly developer rate ($150).

Transitive Dependency

A dependency that is not directly declared by a project, but is required by one of its direct dependencies. Example: If your app uses Package A, and Package A uses Package B, then Package B is a transitive dependency. These create hidden supply chain risk.

God Table

A database table with an excessive number of columns (>50), indicating poor normalization. These tables are difficult to maintain, cause performance issues, and often signify rushed schema design. Remediation typically requires 40+ hours.

Heap Table

A database table lacking a PRIMARY KEY constraint. Without a primary key, the database cannot uniquely identify rows, leading to data integrity issues, replication failures, and poor join performance.

CRAP Index

Change Risk Anti-Patterns. A metric combining cyclomatic complexity and test coverage to predict the likelihood that code changes will introduce bugs. Scores above 80 indicate code that is effectively untestable.

Technical Debt Interest (TDI)

The ongoing productivity cost of not addressing technical debt. Calculated as 15% of total remediation CapEx, representing the annual velocity drag on development teams forced to work around legacy issues.

LibYears

A measure of dependency freshness. The sum of years each dependency is behind its latest stable release. A LibYear score of 10 means the project's dependencies are collectively 10 years behind current versions—indicating supply chain risk.

Toxic License

Open-source licenses with "viral" or "copyleft" provisions that can contaminate proprietary code. Examples: GPL, AGPL, SSPL. Using code under these licenses may require releasing your entire codebase under the same license.

Statistical Loss Expectancy (SLE)

The expected financial loss from a security incident, calculated as: Asset Value × 60% × Exploit Probability. VIGILCAP adds a Confidence Penalty for untested code, increasing SLE by 10-20% when CRAP Index is elevated.

APPENDIX C: BUYER'S NEGOTIATION PLAYBOOK

⚠ **DO NOT SHARE WITH SELLER — This appendix contains negotiation strategies based on identified technical liabilities.**

Exposed Credentials

"Require immediate remediation and security audit within 30 days of close."

Leverage: $50,000 escrow hold per exposed credential

High Technical Debt

"TDR of 67.0% with $3,384,480 remediation liability. Negotiate 15% purchase price reduction."

Leverage: $3,384,480 remediation escrow

Critical Complexity Risk

"CRAP Index of 100/100 indicates untestable code. Require 90-day mandatory refactoring warranty with code quality milestones."

Leverage: Indemnity clause for post-close defects + $100,000 quality escrow